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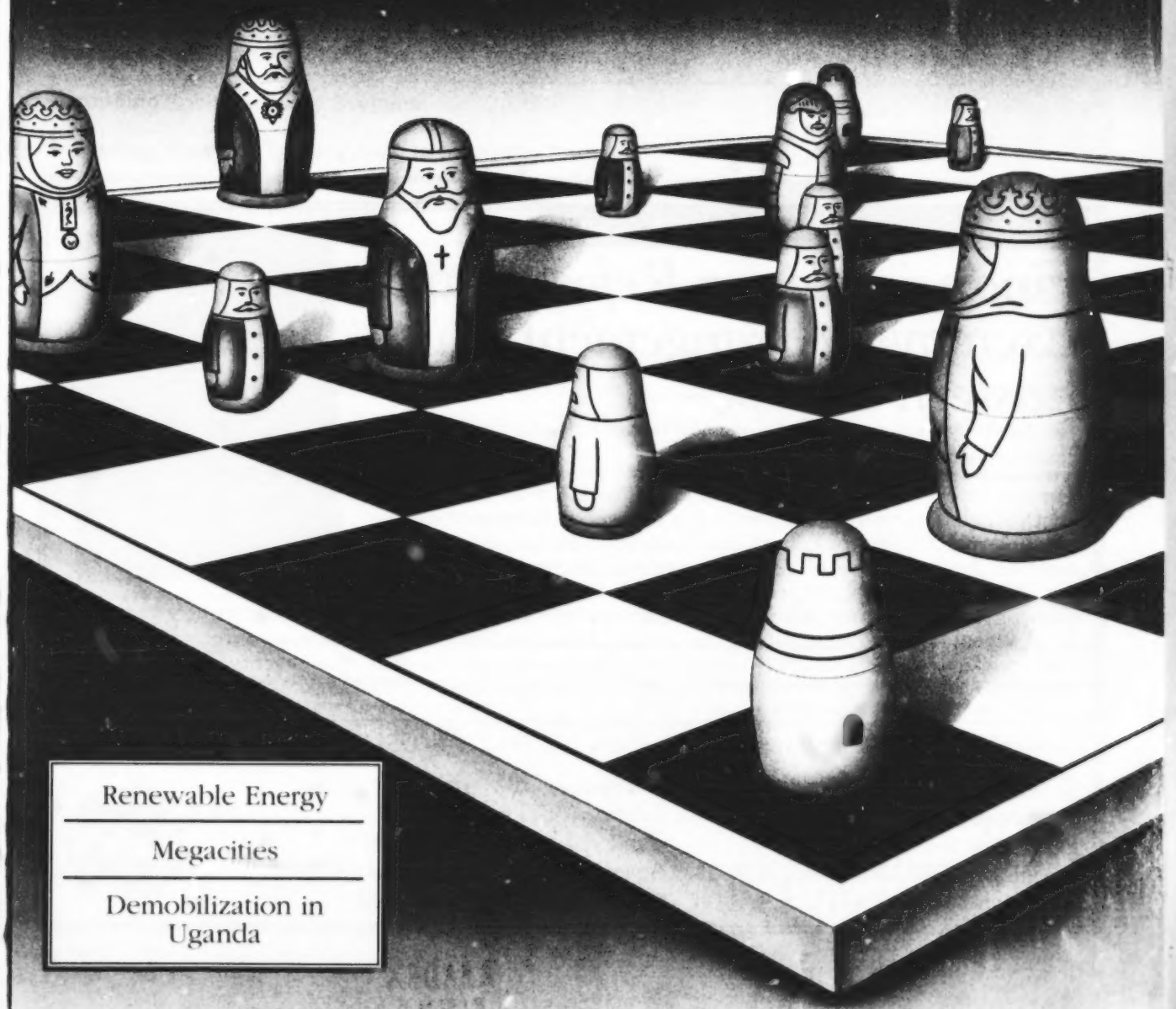

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The Ruble Area: A Breaking of Old Ties?

GRANT SPENCER AND ADRIENNE CHEASTY

SINCE the dissolution of the Soviet Union, most of the former member states have retained the ruble as their national currency but have followed independent monetary policies. Such a combination is not sustainable. With mounting disarray in the ruble area, each state must now quickly adopt either a common monetary policy or a separate national currency.

Over the past year, Estonia, Latvia, Lithuania, and Ukraine have left the ruble area and launched currencies of their own. Azerbaijan, Kyrgyzstan, and Moldova say they intend to follow suit, and several other states are considering doing the same. This is the culmination of many months of disarray in the ruble area, following the demise of the single Soviet monetary authority. First, credit policies had begun to diverge in different parts of the former USSR. Then states started to issue their own "coupons" or parallel currencies, and, in the wake of a wave of payments restrictions, rubles in different states began to trade at different exchange rates—effectively putting an end to the ruble zone as a single currency area, or monetary union (Table 1).

This situation cannot continue if the remaining ruble area states hope to avoid hyperinflation, implement credible adjustment programs, and establish market economies. Each state must now decide whether it wants to remain in the ruble area and attempt to establish a common monetary policy, or pursue an independent monetary policy under a separate national currency. This article looks at the options open to them, as well as the forces that led to the current dilemma.

How the system unraveled

In the closing days of the USSR, the old Gosbank system was replaced by a more decentralized system in which the main branch of the Gosbank in each of the newly independent states was transformed into a central (or national) bank. Initially, the room for maneuver for the new central banks was limited in that the Central Bank of Russia (CBR) took over the sole power of issuing ruble currency, since all the printing presses were located in Russia. But the non-Russian central banks quickly discovered that they could determine their own rates of domestic credit expansion by borrowing from the CBR, by creating new commercial bank reserves, and, in some cases, by issuing parallel currencies or "coupons."

Thus, not surprisingly, as 1992 wore on, monetary policies and inflation rates began to diverge in different parts of the ruble area as national credit policies accommodated varying degrees of price liberalization, different levels of budget deficits, and diverse trade imbalances. Without a single monetary authority to coordinate national policies, no individual state had an incentive to clamp down on credit expansion; quite the reverse: each state had an incentive to maximize its claim on ruble area resources by expanding credit at a faster rate than the area average.

In the early months of 1992, the overall monetary policy stance in the ruble area remained more or less under control, since Russia—which by sheer weight tended to exert the dominant monetary influence in the ruble area—maintained a relatively restrained overall monetary policy. As a result, following a surge of prices at the time of the price liberalization in January, retail price inflation in the ruble area fell sharply in the second quarter. For example, Russian consumer price inflation fell from 27 percent a month in February to 7 percent in July. As the year progressed, however, all ruble area states tended to ease their monetary policies. The easing was most pronounced in some of the fuel-importing states—notably Ukraine—which attempted to postpone the need for adjustment by expanding credit.

Much of the monetary easing through the second half of 1992 was motivated by policy choices concerning extensive subsidies to enterprises. These subsidies were reflected in large government budget deficits, financed by central bank credit, and in direct subsidized credits to ailing state enterprises. In Russia, the finance rate of the CBR was left at 80 percent (well below the rate of inflation), domestic bank financing of the fiscal deficit averaged around 9 percent of GDP over the second half of the year, and a large share of CBR credit to banks was directed to specific sectors at heavily subsidized interest rates. But there is no question that a further major cause was the basic imbalance between resource-rich Russia and the other states, together with the way in which this imbalance was financed.

Table 1

Currencies in the states of the former USSR, April 1993

Armenia	Ruble
Azerbaijan	Manat and ruble (1 manat = 10 rubles); manat to be sole currency in the near future
Belarus	Rubel and ruble (1 rubel = 10 rubles); separate national currency under consideration
Estonia	Kroon (8 kroon = 1 DM), fixed since June 20, 1992, under currency board arrangement
Georgia	Ruble and coupons
Kazakhstan	Ruble
Kyrgyzstan	Som (approved May 3, 1993)
Latvia	Latvian ruble (130 LR = 1 US dollar on April 5, 1993), floating since July 20, 1992
Lithuania	Talonas; (505 tal = 1 US dollar on April 9, 1993), floating since October 1, 1992
Moldova	Ruble and coupons circulate at par; separate national currency under active consideration
Russian Federation	Ruble
Tajikistan	Ruble
Turkmenistan	Ruble
Ukraine	Karbovanets (1 karbovanets = 0.3 rubles on April 13, 1993), floating since November 12, 1992
Uzbekistan	Ruble and rationing coupons

Source: National central banks of the states of the former USSR.

Under central planning, administered prices had been set in such a way that imbalances in the measured value of interstate trade were small. Also, no constraints were placed on cross-border payments or financing. However, when price liberalization began in early 1992, including a staggered but substantial rise in fuel prices toward world market levels, the terms of trade turned sharply in Russia's favor and against the non-Russian states that are net energy importers. For the first time, the non-Russian states had to take heed of their payments imbalances, becoming dependent on financing from surplus trading partners. They were ill-equipped to cope: besides the financing problems created by the escalating cost of energy imports, they had to contend with the inadequacies of the payments mechanism that had been bequeathed by the Soviet system (see "Energizing Trade of the States of the Former USSR," by Constantine Michalopoulos and David Tarr, *Finance & Development*, March 1993).

Russia stepped into the breach by financing the spending of deficit states through the provision of automatic credit to their correspondent accounts at the CBR. However, this extension of credit from Russia to the other states allowed them to continue their expansionary domestic credit policies while at the same time weakening Russia's own monetary policy stance. In this way, the worsening trade imbalances were a further factor contributing to the general easing of monetary conditions in the ruble area in the second half of the year. Reflecting this easing, the monthly rate of increase in Russian consumer prices rose from 7 percent in July to 25–30 percent in October-December, and has remained in this range. In the Moscow foreign exchange market, the nominal value of the ruble fell from an average of 125 per dollar in June to 415 in December and more than 600 in March 1993.

Making matters worse was the acute shortage of currency, which gave rise to serious difficulties in paying salaries and pensions. This stemmed from an inability to print banknotes fast enough to keep up with inflation, along with a growing use of cash by households and businesses to try to circumvent major technical problems with the payments system. Some states felt the pinch more than others. For example, Russia's share of rubles issued by the CBR rose from 64 percent in December 1991 to 77 percent in June 1992, while the shares of Belarus and Georgia dropped from more than 3 percent to about 1½ percent, and the shares of Ukraine and the Baltic states fell even more sharply.

To mitigate the cash shortage, Ukraine, followed by many other states (Azerbaijan, Belarus, Latvia, Lithuania, and Moldova) began to issue coupons that were allowed to circulate in parallel with ruble currency. In some cases, the coupons were declared sole legal tender for certain transactions, such as purchases in state stores or transactions in border areas, in attempts to restrict the export of goods to neighboring states that were liberalizing prices at a relatively rapid pace. Even after the CBR began issuing large denomination ruble banknotes in the third quarter, and essentially eliminated the currency shortage by late 1992, the use of coupons continued unabated. On July 1, 1992, Russia attempted to stem the flow of credit to the other states—and hence insulate itself from the actions of the other central banks in the ruble

area—by changing the technical arrangements for interstate payments. The CBR imposed limits on the amount of credit it would provide through the bilateral correspondent accounts—no longer would it automatically finance in full the incipient payments imbalances. However, while the limits temporarily dampened the financing available to some states, overall credit expansion to the other central banks remained substantial, as many states succeeded in negotiating extensions to the limits.

The deficit states have tried to cope with the credit limits primarily by rationing their importers' access to Russian rubles—that is, by restricting import payments for nonessential items. Governments have also attempted to enhance earnings of Russian rubles by insisting on pre-payment for exports and, more recently, by allowing the relative scarcity of Russian rubles to be reflected in premia vis-à-vis non-Russian (noncash) rubles. Since the deposit rubles issued by banks in various states have begun to trade at exchange rates that differ from par, they are increasingly regarded as *de facto* different currencies.

Markets for national noncash rubles have developed outside the ruble area and are also emerging within the ruble area, although progress in the latter case has been complicated by the continuing circulation of a common cash ruble that, in principle, remains exchangeable at par for deposit rubles. For example, in Latvia on April 5, 1993, ruble claims on Belarus and Moldova were traded at discounts of 19 percent and 6 percent, respectively, relative to ruble claims on Russia. In Belarus, March auctions in Russian deposit rubles were indicating a 24 percent discount on Belarussian deposit rubles.

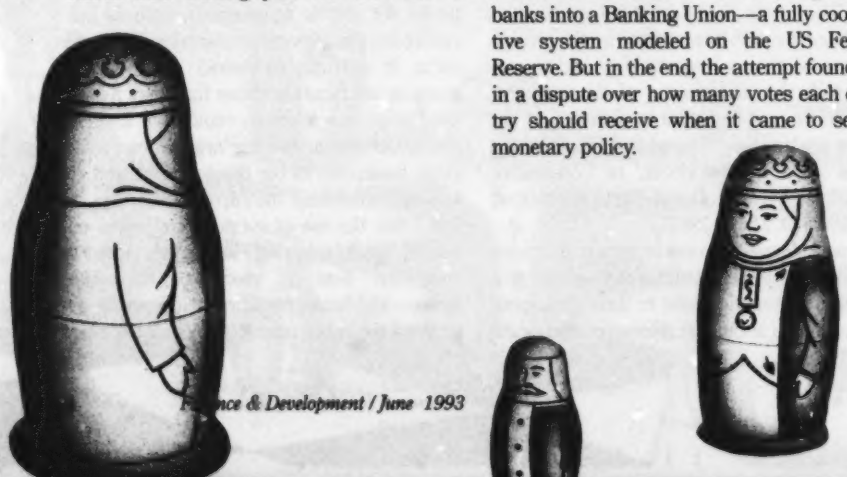
Ending the disarray

Where does this leave the newly independent states? Certainly, as long as the present situation continues, ruble area states have every incentive to act as "free riders"—trying to expand credit faster than their neighbors. For if they do, they will have the wherewithal to outbid their trading partners and claim a larger share of the shrinking ruble area output. If, instead, they try to pursue a conservative credit policy, they will unavoidably continue to import inflation from the rest of the ruble area, while exchanging domestic goods and services for claims of uncertain value on the other ruble area states. To insulate themselves from this process, they would then be tempted to impose additional trade and payments restrictions of the type already imposed by Russia.

Moreover, it is highly doubtful that the present situation can continue. The spontaneous disintegration of the ruble area into an unsatisfactory set of semi-independent currencies suggests that a common currency area cannot be sustained in the present uncoordinated policy environment. If hyperinflation and a trade war are to be avoided, each country must decide between two alternatives: (1) remain in a single currency area and return to a common monetary policy; or (2) introduce a separate currency and allow exchange rate adjustments to insulate it from its neighbors' inflation. There do not appear to be any other viable choices.

A unified monetary policy. For the first option to work, countries would have to agree on credible mechanisms for carrying out a *common* monetary policy. Credit emission would have to be determined by a *single* authority empowered to impose strict limits on credit expansion by individual central banks and for the area as a whole. A single ruble currency would circulate throughout the area, with distinct national cash rubles acceptable only if their quantities were regulated so as to ensure a fixed exchange rate against the ruble. Foreign exchange systems, central bank finance rates, and commercial bank reserve requirements would need to be harmonized across the board. Moreover, a degree of coordination between fiscal policies would be necessary to ensure that budgetary targets were consistent with the credit ceilings.

The cooperative solution. All of the requirements listed above seemed possible at the time of the break-up of the USSR. Plans were drafted to reconstitute the seceding central banks into a Banking Union—a fully cooperative system modeled on the US Federal Reserve. But in the end, the attempt foundered in a dispute over how many votes each country should receive when it came to setting monetary policy.



Efforts to re-establish a unified monetary stance continued throughout 1992. These included an initiative by the IMF staff to promote multilateral monetary policy coordination (discussed at a May conference of central banks in Tashkent), several bilateral agreements negotiated subsequently on Russia's initiative, and the Bishkek agreement in October, which called for the establishment of an Interstate Bank (ISB). The ISB was subsequently founded at the heads of state summit in Minsk in January 1993 with most ruble area states plus Ukraine as members. However, in recognition of continuing difficulties in agreeing on monetary policy, the bank's role was restricted (essentially) to multilateral clearance and settlement of payments between member central banks. While the ISB may recommend measures to improve policy coordination among the member banks, it will have no responsibility for ruble area monetary policy.

The Russian solution. Increasingly—since effective multilateral cooperation is proving impossible—the smaller states are beginning to see the option of remaining within the ruble area as a bilateral arrangement to hitch their monetary policy wagon to Russia's. Such a course would mean accepting Russian interest rates and inflation and agreeing on domestic credit policy with the CBR: national central banks would effectively become branches of the CBR. To achieve monetary and price stability, it would then be a matter of waiting for Russia to tighten its monetary policy. For some states, the option of a bilateral agreement is seen to offer the prospect of improved terms for energy and credit contracts with Russia. However, the monetary policy aspects currently appear unattractive to most of the states. It would be difficult politically for them to surrender monetary policy authority to Russia, and recent experience—in Estonia and Latvia, as well as in Russia—has shown that Russian monetary policy does not necessarily provide a better anchor than would their own currencies.

Separate currencies. In this environment, many central banks now see the second option as the only sure path to monetary stability. Formally adopting an independent currency would delink the issuing central bank from the CBR and give it control of its own inflation performance. But to achieve stability, each state would have to accompany the move to a separate currency with a stringent anti-inflation monetary stance, and allow its exchange rate to adjust vis-à-vis the ruble. In particular, countries that leave the ruble area would no longer have leeway for unrestricted financing of budget deficits and troubled enterprises.

To date, the three Baltic states, Kyrgyzstan,

Table 2

Low interest rates, high inflation

	Central bank rate (percent annually, at end of period) 1992				Retail price inflation (percent change during period) 1992			
	I	II	III	IV	I	II	III	IV
Belarus	20	20	30	30	286	44	37	93
Kazakhstan	n.a.	50	65	65	390	85	46	98
Kyrgyzstan	17	17	50	50	285	29	44	96
Latvia	10	50	80	120	226	45	88	44
Russian Federation	20	80	80	80	467	48	94	109
Ukraine	18	30	30	80	332	56	70	89
"Moscow interbank market rate"	84	102	106	126				

Sources: Government officials of the states of the former USSR and IMF staff estimates.
[1] Includes the effect on inflation of price liberalization and the elimination of the monetary overhang.
n.a.: not available.

and Ukraine have chosen the separate currency option. The Estonian kroon was introduced on June 20 and pegged to the deutsche mark in a currency board arrangement. The Latvian ruble, already in circulation as a supplementary currency, was declared the sole legal tender in Latvia on July 20, and was floated against other currencies, including the ruble. On October 1, Lithuania declared that previously issued coupons (the talonas) would become the sole legal tender pending the introduction of a new currency, the litas; the talonas is also floating. On November 12, Ukraine declared that the coupon (under the new name of karbovanets) would be the sole legal tender and would be exchanged for US dollars on the basis of competitive bidding among commercial banks. The karbovanets eventually will be replaced by a national currency, the hryvnia. Finally, on May 3, 1993, Kyrgyzstan's Parliament voted to introduce the som as sole legal tender; it will also float.

Three of the four countries that left the ruble area in 1992 have used their independence to stabilize. The Baltic states have chosen to adopt the firm policies required to reduce inflation relative to ruble area inflation. Latvia, for example, reduced inflation to less than 3 percent per month by the end of 1992, compared to 25–30 percent per month in the ruble area states (Table 2). As a consequence, the new currencies of the Baltic states have appreciated against the ruble. Ukraine, on the other hand, has chosen to inflate at a faster rate, on average, than the ruble area, with the result that the karbovanets had lost two thirds of its value relative to the ruble by April 1993.

As for the states remaining in the ruble area, some of them (such as Azerbaijan and Moldova) have recently announced their intention to introduce separate currencies. In the case of Azerbaijan, the manat, introduced as a parallel currency in August last year, will become the sole legal tender. Several others are making preparations for a possible departure from the area, in some cases including arrangements to print their new currencies. However, these countries are still holding off making their final decisions.

The states see the decision to leave the ruble area as hinging on a number of factors in addition to the issues of ruble area stability and monetary independence. The desire for a distinct national symbol tends to favor a separate currency, while the wish to maintain existing interstate arrangements on trade, credit, and energy pricing favors the ruble area option (at least as a transitory solution). States fear that interstate balance of payments financing would be less automatic in a currency regime separate from that of Russia. Further, a number of states have been concerned that departure from the ruble area would cause a sharp increase in the cost of oil imports from Russia. While such worries are tending to become less relevant as the price of Russian energy moves steadily towards world levels, the prospect of improved economic relations within the ruble area continues to delay final decisions on the separate currency question.

For states that do adopt the separate currency option, it is important that they ensure the orderly introduction of their new currency (and the orderly withdrawal of ruble currency) in a way that minimizes disruptions to themselves and to their neighbors. Moreover, they must not underestimate the efforts required to create the institutions and acquire the expertise for conducting independent monetary and exchange rate policies and managing international reserves. They must also face decisions about their exchange regime—whether to allow the new currency to float or to peg the exchange rate, and if so, to what currency or group of currencies—and the rules governing the new currency's convertibility into foreign exchange (see "The Experience with Floating Rates" in this issue).

Other problems to solve

The resolution of the ruble area's monetary arrangements will not solve all of the financial problems that have plagued the former Soviet states in 1992. In 1993, whether or not a state chooses to remain in the ruble area, it will need to address the fundamental problems of inflation and growing payments imbalances. Monetary policy—with support from fiscal policy—should be squarely directed at containing inflationary pressures, which have reached unprecedented proportions. No state will achieve monetary stability until it puts a cap on the unrestrained credit to enterprises that was widely observed during 1992. To do so will require the imposition of hard budget constraints on enterprises and a rethinking of the methods used to control central bank credit emission. Certainly, the practice of allocating subsidized directed credit must be curtailed.

For most states, 1993 will also be a year of painful balance of payments adjustment. The payments restrictions of the latter part of 1992 signalled that Russia will no longer automatically accommodate trade imbalances with the other states. Thus, as Russian energy prices approach world levels, most states will be required to make major savings in their net usage of energy and foreign exchange in order to contain their foreign borrowing within manageable proportions. ■

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Intergovernmental Finance: *Critical to Russia's Transformation?*

JENNIE I. LITVACK AND CHRISTINE I. WALLICH

AS RUSSIA and other transition economies move from centrally planned to market-based systems, fiscal decentralization emerges as an important dimension of public sector reforms. The design of intergovernmental fiscal systems will be critical to meeting key reform goals of stabilization, privatization, a robust safety net, and growth.

Intergovernmental finance is not a "local matter." How services and goods are provided by various levels of government and who pays for them have consequences that extend throughout the economy. In transition economies, the design of fiscal federalism is crucial because it affects almost all of the key goals of reform, including macroeconomic stabilization, the effectiveness of the social safety net, private sector development, and, in the case of Russia, nation building.

Russia, like other transition economies, is facing a difficult period of economic and political transition. It is attempting to simultaneously restructure its economic system, protect the well-being of its citizens, stabilize prices, achieve external balance, and establish a system of governance acceptable to 91 regions (oblasts) whose cultural identities, natural resource endowments, and degree of economic development differ widely.

Intergovernmental fiscal reform will play an important role in the success of Russia's reform effort. Russia's subnational governments account for almost half of total budgetary outlays, and sound intergovernmental fiscal policies are, therefore, crucial to a successful stabilization effort. Also, with centrifugal tendencies throughout the federation, how revenues are divided among oblasts is crucial for establishing a cohesive federation. The ownership role of subnational governments also makes them crucial as players or as impediments to privatization. Finally, expenditure reform has given subnational governments important new responsibilities for the social safety net. Failure to design an appropriate system of intergovernmental fiscal relations can jeopardize all these goals; conversely, a well designed system can facilitate greatly in achieving them.

This article explores why intergovernmental fiscal relations are so critical to Russia's national goals. It looks at how traditional public finance theory is challenged by transition economies, and at the implications—for Russia and other transition economies—of systems that are not well designed.

The right design

An ideal system of intergovernment finances would:

- ensure correspondence between subnational expenditure responsibilities and overall subnational resources;
- incorporate incentives for subnational governments to mobilize revenues;
- ensure that the macroeconomic management policies of the central government are not compromised;
- give appropriate expenditure discretion to subnational governments, support public infrastructure development, and improve the accountability of government officials;
- be transparent, based on objective, stable, non-negotiated criteria, as well as administratively simple;
- be consistent with nationally agreed income distribution goals; and
- support the emergence of a governmental role consistent with market-oriented reform.

The challenge of transition economies. In transition economies, the first step in designing a good system of intergovernment finance is to delineate the roles of the public and private sectors. During the transition to a market economy, the pervasive role of government must be significantly reduced. In countries as diverse as China and Romania, budgetary outlays as a percent of GDP have

been halved over the course of reforms, as the role of government changes from owner, producer, and employer of first resort to provider of goods that cannot, because of externalities, be left to market forces.

Assigning expenditures. What are the respective roles of central and subnational governments? Traditional public finance theory suggests that an "efficient" expenditure assignment between levels of government is based on the geographic dimension of benefits. Ideally, each jurisdiction should provide and fund services whose benefits accrue within its boundaries. Responsibilities for stabilization policy are typically assigned to the central government, as is that of income redistribution (including the social safety net), since labor and capital mobility often interfere with serious attempts by local governments to affect income distribution. Until recently, Russia's system of intergovernmental finance broadly observed these principles.

Transition economies provide a special challenge, however, because the responsibilities and nature of enterprises and government are changing dramatically. Enterprises that played an important role in providing social assets (e.g., schools, hospitals, housing, urban infrastructure, water and sewerage) must spin off these expenditures because they are not directly related to production. Some divested social assets (e.g., guest houses) could be privatized; but many other expenditure functions (e.g., schools, hospitals, urban infrastructure) have benefit areas that dictate that they be assigned to the subnational level. Experience from transition economies indicates that as fiscal decentralization and privatization occur, the expenditures of subnational governments increase, relative to those of the center. The key challenge for governments is to determine the actual costs of providing these services and design a system of tax assignments, shared taxes, or transfers that provides for sufficient revenues to meet the assigned expenditures.

Revenue and transfer policies. There are many models of how to provide subnational governments with resources. Taxes can be assigned to different levels of government or shared between levels of government. Some countries allow concurrent tax powers (sharing the tax base) by allowing local surcharges on federal taxes, such as the personal income tax. In most countries, subnational revenues are supplemented by transfers, since typically the central government gets the bulk of the revenues, and subnational governments are assigned far more in expenditures than can be financed by their own revenue sources.

Designing the transfer system is complex, not least because there are usually a number of objectives, as noted above. The first step is to determine the aggregate volume of the transfer; the second is to determine its distribution across subnational governments. Transfers can be ad hoc and negotiated or, preferably, set according to a formula-based distribution and an ex-ante agreed volume for the subnational level that would provide budgetary certainty. Typically, a distribution formula will:

- estimate minimum or "normed" subnational expenditure needs (based on assigned expenditures and often related to population, per capita income, social indicators, or actual cost of delivering services); and
- assess the revenues (own, assigned, or shared) available to finance these needs (often looking at the localities' tax effort).

Depending on how much inter-regional equalization of expenditures is desired, transfers will fill all or part of the expenditure/revenue gap.

Mismatched revenues and expenditures. When subnational expenditure needs and revenue flows (including transfers) are not well matched, the subnational government is left with inadequate resources to provide needed services. In most countries, this leads to a fiscal squeeze on the local economy. In transition economies, because of the soft budget constraint, such an imbalance can lead to fundamentally different—and potentially more damaging—outcomes. Searching for ways to finance their services, subnational governments revert to "coping mechanisms" to permit services to be delivered where otherwise they could not. These include shifting public budgetary outlays to enterprises still owned by the subnational government; resisting privatization of enterprises that provide social services; and, in the peculiar soft budget environment that still prevails in the financial sector in many transition economies, encouraging government-owned enterprises to borrow (or accrue arrears) in order to be able to continue providing public services. Subnational governments may also establish ex-

trabudgetary funds that make the budget less transparent. As the example of Russia shows, if successful, these coping mechanisms can threaten macroeconomic stability and privatization; if unsuccessful, underfunding subnational governments can jeopardize the provision of the social safety net. In Russia, a three-tier federation with considerable diversity among regions, resource endowments, and ethnic groups, coping mechanisms may undermine national cohesion.

Fiscal federalism in Russia

Russia is at a crossroads. Since the breakup of the union, it has been seeking to define a new identity, introduce democracy, stabilize and privatize the economy, and accommodate clashing regional demands. Fiscal federalism is at the heart of this political and economic challenge and key to the tasks ahead.

Macroeconomic stabilization. The immediate objective of Russia's economic policy is stabilization, in which fiscal policy plays a crucial role. A striking reality of Russia's stabilization effort is the lack of revenue-expenditure correspondence at the oblast level. In the fiscal program for 1992, oblast budgetary expenditures increased as a result of the abrupt reassignment of many social expenditures and all investment outlays (including airports and military housing) to the subnational level. Oblast governments are also assuming the many public expenditures spun off by their enterprises. Social outlays should continue to rise significantly as growing unemployment and inflation lead to increasing numbers of vulnerable people. On the tax side, despite increased expenditures at the subnational level, the 1992 budget envisaged a marked increase in taxes, which accrue mostly to the federal level. The resulting revenue-expenditure mismatch may be severe, especially in some of Russia's poorer oblasts.

Russia's intergovernmental system has not addressed these expenditure re-assignments, nor the budgetary pressures they imply for subnational governments. The federal government's attempts to meet its budget deficit targets have pushed more and more expenditure responsibilities to the oblast level, while retaining ever increasing amounts of revenues at the central level. The basic strategy was to push the deficit downward by shifting unfunded expenditure responsibilities to subnational levels in the hope that they would do the cost cutting. Superficially, this has served to reduce the federal budget deficit, but the central government is merely pushing its headaches down to the subnational level.

Caught without enough revenue to cover their newly assigned mandates, oblasts have accumulated expenditure arrears and, in some cases, delayed federal tax remittances; borrowed from banks and from "their" enterprises, which have easier access to credit than do the oblast governments themselves, thus adding to pressure for credit creation; and developed extrabudgetary resources. Ironically, focusing stabilization policy on the federal deficit is leading to actions that will further destabilize the economy, reduce the transparency of budgetary accounts, and, if oblasts are successful in their ability to obtain credit, subvert monetary objectives.

Privatization. Efforts to reduce the budget deficit by squeezing the subnational sector also harm privatization. An important aspect of fiscal decentralization in Russia has been the transfer of enterprise ownership from central to subnational governments. Oblasts derive significant funds from enterprises they own and benefit significantly from the expenditures they finance. Hard-pressed oblasts will therefore oppose privatization and seek to reinforce their revenue base by holding onto their enterprises, in an effort to ensure the continued provision of services increasingly unaffordable to oblast and rayon governments under current intergovernmental fiscal arrangements. At the same time, by encouraging enterprises to provide social services, these enterprises become harder still to privatize.

Economic growth. A fiscal squeeze on subnational governments can also worsen resource allocation and growth. Oblasts' vested interests in enterprise revenues and the provision of services by enterprises will, in an economy as regionalized and with as few antimonopoly policies as Russia, inevitably encourage domestic protectionism and inter-oblast trade barriers to protect local monopolies. This will ultimately reduce economic growth, just as impeding trade between states of the former USSR has done. Evidence from a number of oblasts suggests frequent use of export barriers to ensure that revenues from origin-based sales taxes stay inside the oblast. The behavior of oblast governments plays a crucial role in determining the efficiency with which the Russian economy performs.

Social safety net. In an apparent effort to balance the budget, in 1992 the central government in Russia transferred responsibility for social protection and price subsidies—previously financed by transfers from the federal government—to the oblasts. However, it did not estimate the cost of the social protection programs and whether it could be met with revenues available in each oblast. If an adequate social safety net is a national priority during the difficult transition ahead, then subnational governments must be adequately funded to administer the programs. Local administration of these benefit programs will facilitate targeting, but federal financing would be more appropriate.

Nation building. The ad hoc shifts in expenditures from the central to the subnational level—such as social outlays and capital investment—have led skeptical oblasts to wonder what expenditure functions the center performs that are sufficiently important to justify its existence. Already, the center is failing to provide macro stability. By not being concrete in assigning expenditure, and by jettisoning federal outlays onto subnational governments, the federal government could contribute to its worst fear—the disintegration of the Russian Federation.

The sense of injustice at the subnational level has risen as oblasts are left struggling with inadequate resources and frustrated by a revenue system that is not transparent. Wealthier oblasts complain that the present negotiated intergovernmental fiscal system is over-equalizing (i.e., they are subsidizing the poorer oblasts) and threaten to opt out.

"The federal government's attempts to meet its budget deficit targets have pushed more and more expenditure responsibilities to the oblast level, while retaining ever increasing amounts of revenues at the central level."

(Regression analysis indicates that there is not a great deal of equalization in Russia's system, in reality.) This is not as impossible as it seems, since the system of tax administration, in which all tax revenues are collected at the oblast level and below and remitted to the federal government, makes the center very dependent on oblast compliance and, thus, vulnerable. Indeed, in early 1992, some twenty disgruntled oblasts unilaterally halted tax payments to the center. The proliferation of such behavior could lead to the fiscal dissolution of the Russian Federation, just as the failure of union republics to contribute to the union budget helped to foster its dissolution in 1991.

Dissatisfaction among oblasts is heightened by ethnic tensions and disagreements over natural resource revenues. Areas inhabited by non-Russian ethnic groups claim the right to greater fiscal autonomy. And some areas rich in natural resources feel entitled to special fiscal arrangements that allow them greater benefits from their natural resource revenue. For example, Yamal and Khanti-Mansisk, which together produce over 80 percent of Russia's oil and gas, have prevented the federal government from capturing all export and petroleum tax revenues. And Yakutia, which is home to an ethnic minority representing one percent of Russia's population and contains 99 percent of Russia's diamonds, is demanding greater fiscal autonomy and retention of natural wealth. It and others have threatened to break away from the rest of Russia if their demands are not met.

The role of the fiscal system

Given the tensions between the federal and oblast governments in Russia, the importance of developing a transparent, fair, consensus-based framework for intergovernmental finances with revenue-expenditure correspondence cannot be overstated. To establish such a system would require a number of specific steps. First, one must determine the aggregate revenues required by oblasts, based on their expenditure assignments. Some proportion of these revenues must then be distributed across oblasts on the basis of origin of collections—giving wealthier oblasts with greater tax capacity greater revenues; the re should be distributed on the basis of a transparent and fixed formula. Local taxes or surcharges and limited borrowing might also be part of the picture. Such an approach is flexible and can be adjusted to accommodate changing expenditure assignments. The relative proportions of the revenues distributed on the basis of derivation and formula (i.e., the trade-off between regional equity and growth) can also be adjusted: choosing the degree of equalization is essentially a political judgement. In Russia today, this is arguably a key issue. If the intergovernmental fiscal system places too much emphasis on equalization, wealthier oblasts—including those rich in natural resources—will be less willing to participate in the federation. The need for political unity may thus be greater than the need for equality, suggesting that the intergovernmental system should allow the wealthier oblasts to develop more rapidly by reaping the benefits of their larger fiscal capacity.

A well-designed intergovernmental system that matches expenditures and revenues while incorporating the interest of diverse regional entities can contribute to the cohesion of the Russian Federation, and lies at the heart of any solution to demands for further autonomy.

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Other transition economies

The critical linkages between intergovernmental fiscal relations and key reform objectives such as macroeconomic stability, privatization, social safety net, and nation building are not unique to Russia. Indeed, these issues are found in most transition European countries and aspects of these problems are found in countries throughout the world. Countries such as Canada, India, Malaysia, and the United Kingdom have tried, with varying degrees of success, to buy the cooperation of subnational governments through the design of the intergovernmental fiscal system. In transition economies such as Bulgaria, Hungary, and Romania, the fiscal squeeze on local governments seems to be making them impediments to, rather than partners in, privatization. And it is not only in Russia that the social safety net and other outlays have been shifted "downstairs," threatening both service provision and provoking the introduction of coping mechanisms—which contribute to further instability.

The major challenge for Russia as it develops an intergovernmental financing system is to create an integrated framework for change that will be compatible with short-term stabilization, will combine rules with discretion, and will be flexible enough to accommodate the major structural shifts in the economy, while also providing stability to subnational governments. The present represents a critical window of opportunity to introduce such refinements, inasmuch as the overall design of the intergovernmental system is still in transition. New laws on fiscal decentralization introduced in 1992—the "Basic Principles of Taxation"—attempted to introduce greater transparency and to address some of these concerns. Nonetheless, the design of the program is incomplete and additional reforms are needed. The next step for Russia is to undertake a careful, concrete empirical study of expenditure assignments, revenue options, and transfers. Also needed is a process to establish consensus on the basic directions of the intergovernmental system—the degree of equalization, the allocation of expenditures, and the rights of natural resource producers.

Impediment or facilitator?

Is fiscal federalism an impeding or a facilitating factor in the transition toward a market economy? It certainly can be either. It is easy to view intergovernmental fiscal relations as yet another technical area to be addressed. However, intergovernmental finance will have a major impact on the efficiency with which Russia and other transition economies perform on the macroeconomic front, on the safety net, and on the success of privatization policies. In sum, local finance is not a "local matter." ■

For further information, see Christine Wallich, "Fiscal Decentralization: Intergovernmental Relations in Russia," Studies in Economies in Transition, No. 6, World Bank, and Wallich, C. (ed.), Whither Russia? Fiscal Decentralization in the Russian Federation, forthcoming, 1993.

GUEST ARTICLE

Privatization in Eastern Europe:

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THREE years after the systemic changes sweeping the political and economic landscape of Eastern Europe, privatization is still widely talked about and seemingly pursued. Yet, despite ardent support for the concept, not much privatization is actually taking place, and what does occur is often much more ambiguous than originally expected.

The enthusiasm for privatization that characterized the first period of postcommunist reforms was somewhat surprising to many observers familiar with the Eastern European environment. For if the communists had any success in their attempts at ideological indoctrination, it was in persuading many Eastern Europeans that private property in the area of large industry was a thing of the past.

What most oppositionists argued for—and it should be remembered that much of the opposition in the last years of communism came from worker movements, such as the Polish Solidarity trade union—was decentralization, with at most a marginal role for private property outside retail trade and the service sector. And yet, following the collapse of communism, privatization became the word of the day, and many influential East Europeans became, at least on the surface, the most ardent proponents of the purest version of capitalism.

Three years later, privatization is still talked about and seemingly pursued, but the results are mixed. It is too early, of course, to judge the effects of privatization where it actually occurred, but it is not too early perhaps to observe that not much of it is occurring in most places, and that what does occur is much more ambiguous than originally expected.

In the broadest sense, privatization should be understood as a transfer of assets from the state to the private sector, accompanied by a radical reallocation of available productive resources, restructuring of the existing institutional setting in which production takes place, and the introduction of new methods of corporate governance, freed from the most noxious kinds of political interference. While privatization in this sense could be expected to lead to far-reaching economic and social transformations, a mere transfer of title is unlikely to have such an effect. Indeed, it may sometimes be doubted whether, under the conditions of many postcommunist societies, it leads to any genuine structural changes or even to a meaningful modification of legal ownership.

Small privatization

Privatization, where it has occurred, has been the most effective in retail trade and the service sector. But the nature of this phenomenon only highlights the complex meaning of the term "privatization." Most stores and service outlets in Eastern Europe hardly resembled their western counterparts: the constant shortages meant that their inventory was not worth very much, and their substandard services did not create a great amount of valuable "goodwill." What these stores and outlets did have was valuable premises that needed to be reallocated to better uses.

In this context, it is interesting to note that, in most cases, the "privatization" of the retail sector did not entail a transfer of the ownership right to the premises; instead, the state retained the title and the premises have been most often merely leased for relatively short periods of time, often with no secure right to renew and a number of burdensome restrictions. It is thus difficult to decide whether to count the new units operating in the premises as "new" or "privatized" establishments. What is quite clear, however, is that the partially released real estate assets have often been used effectively by the private businesses now controlling them. The vibrant private sector in this area is quickly transforming the provision of goods and services in a number of countries in the region. What is also interesting is that, once a significant private sector appears, the success of further transformation in the trade and service area may depend as much on the change in the general economic environment (including monetary stabilization, currency convertibility, and price and trade liberalization) as on the completeness of the privatization itself. Indeed, the most successful transformation has perhaps occurred in Hungary, where genuine privatization has made only limited progress.

Part of the reason why "small privatization" has been a relative success in some countries is that it raises few of the hugely complex corporate governance problems endemic in all efforts to reform larger industries. The privatized shops and service outlets are usually owner-managed, and the low capitalization requirements make for a potentially lively secondary market that is able to correct for many mistakes in the initial allocation. For this reason, it may not be particularly important whether the state turns over the running of small businesses to workers (as is most commonly the case) or whether it sells them to the highest bidder in an open competitive process (as was the case in the former

Is the State *Withering Away?*

"For reasons that are by now too well known to recount in detail, the attempts to emulate western privatizations were, by and large, a failure."

Czechoslovakia), so long as there are no crippling transferability restrictions on the privatized assets.

The failure of sales

The situation is more complicated in the case of larger industries, where privatization encounters serious technical and political obstacles. The initial difficulty faced by the state, if it wants to withdraw from ownership, is the need to find and empower new owners. The first instinct of Eastern European policymakers and their western advisers was to avoid any experiments and follow well known precedents, such as the British-style privatizations, which involved selling shares to the public or to a selected number of private investors.

For reasons that are by now too well known to recount in detail, the attempts to emulate western privatizations were, by and large, a failure. With a few notable exceptions of sales to foreign investors (mostly in Hungary and the Czech Republic), few Eastern Europe enterprises have in fact been sold to outside private investors because of the unattractiveness of investment in Eastern European state enterprises, the slowness of the process, the problems of valuation, the shortage of domestic capital, and the unwillingness of foreign investors to enter at a large enough scale. Whatever sales were actually made in Eastern Europe usually involved complicated deals by which enterprise insiders forced the state to relinquish some of its property rights in their favor.

Hungary exemplifies this type of development, where a decentralized and loosely controlled process of transformation of state-owned enterprises resulted in a Byzantine system of institutional cross-ownership, with (still largely state) companies and banks holding stakes in each other. While the reform of the Hungarian economy is often viewed as the most advanced in the region, a very small proportion of large Hungarian enterprises is actually privately owned; according to most local estimates, the aggregate private holdings of previously state-owned assets amount to about 10 percent of the total. But even the state, despite its lion's share of formal property rights, is not a clear owner of the remainder of nonprivatized assets. The maze of institutional cross-ownership, multiple layers of holding companies, and special arrangements put in place by the managers make it difficult for any party, even the state, to effectively assert ownership or rights. Somewhat paradoxically, the sales-driven transformation of the Hungarian economy not only did not result in a large-scale privatization but may also have hampered the emergence of a clear system of property relations.

Mass privatization

Given the inherent limitations of sales as a method of privatization in Eastern Europe, a number of governments in the region turned to what appeared to be a more promising avenue: various forms of giveaways, designed to combine a speedy transfer of ownership with a measure of social justice and a chance to secure political support for privatization among the broad masses of the population.

Chance and design in the Czech experiment. The most advanced, and the most successful, of all such "mass privatization" programs has been in the former Czechoslovakia. The plan involved a distribution (for a nominal price) of special vouchers to every interested citizen. The recipients could then use their vouchers to bid for shares of a privatized enterprise of their choice or deposit them in an intermediary financial institution (an "investment fund") offering greater investment expertise and diversification. On the supply side, each enterprise, as well as any other interested party, could propose a "privatization project" specifying the method of disposition of the shares of the privatized enterprises, including some combinations of voucher sales, trade sales, and sales to enterprise insiders. In a coincidence that may have been crucial to the plan's success, enterprise insiders often proposed that a very large portion of the shares be sold for vouchers, apparently in the belief that dispersed public ownership would facilitate the retention of insider control. At the same time, spurred by rather irresponsible promises of spectacular returns on the part of many investment funds, over 70 percent of the voucher recipients decided to place their vouchers with the funds. As a result, while the choice of the voucher route of privatization led to a very speedy transfer of title, the plan also produced a significant concentration of ownership, giving rise to a hope that the new owners will exercise effective control over the management of the privatized enterprises.

The Czech plan, with its large measure of external control over the newly privatized

companies, is so far unique: in all other countries in which mass privatization plans have been proposed, the very threat of outside control immediately made it an object of intense political controversy. In Hungary, where enterprise managers have dominated the privatization process, mass giveaway plans have been decried as anticapitalist and have never been given serious consideration. In Poland, proposals of this kind have been discussed since early 1990, but opponents have been able to block their passage through the parliament, despite generous offers of special treatment for enterprise insiders. In Russia, a mass privatization program is under way, but the price has been an effective abandonment of the idea of external control, at least in the first stage of the giveaway process.

Elusiveness of property rights: the case of Russia. According to the Russian plan, every citizen receives, free of charge, vouchers with the nominal value of 10,000 rubles. The plan contains a number of features, including immediate and unlimited transferability of all shares and vouchers, which seemingly facilitate the acquisition of control by enterprise outsiders. But the program also offers insiders unprecedented preferential terms, allowing them to acquire up to 51 percent of their companies at 1.7 times book value unadjusted for inflation (which, together with the use of vouchers, makes the insiders' share close to free). Furthermore, Russian law prohibits investment funds from owning more than 10 percent of the shares of any one company, thus effectively confining them to a subsidiary role in the governance of the privatized enterprises.

What, then, is the meaning of the term "privatization," as applied to the (still very recent) Russian experience? Evidently, the authors of the Russian plan believed that removing assets owned by the state from the control of the old branch ministries, with their roots in the planning system and the bureaucratic nomenclature, was of critical importance to the progress of the reforms and worth significant compromises in terms of the openness of the property system and the role of external control in the future corporate governance structure of the country. They also believed (with reason) that the introduction of a more open system, modeled on the Czech program, was not a politically viable option in Russia. As a price of being able to push through their program, therefore, the government was compelled to grant insiders an initial right to maintain, and sometimes strengthen, their hold on the enterprises. This hold is now formalized under the name of "ownership," but apart from some relaxation of bureaucratic control by the old branch ministries, the practical meaning of this new arrangement is not fully clear. Except for the possibility that insiders may sell their control rights in the future (which, as we shall see, is somewhat problematic), the people in charge of the enterprises are largely the same after the change as before, and the question is whether their incentives are changed significantly enough for a restructuring to take place.

The program seems to strengthen the role of the workers, who are more interested in maintaining employment than maximizing profits, since wages are likely to be significantly more important to them than dividends. The managers, especially in the less viable enterprises, are also likely to view the continuation of state subsidies, rather than the costly and controversial restructuring, as their dominant goal, although there is some hope that the managers of the more viable enterprises will show some interest in breaking away from the old mold.

"The most serious obstacle to the creation of viable secondary capital markets in Russia is the potential lack of demand for the shares of the privatized companies."

Overall, the possibility of insiders alienating their control rights and outsiders gaining significant voice in the running of privatized enterprises offers the prospect of more decisive changes in the governance and functioning of large Russian enterprises. Indeed, the authors of the Russian program evidently hope that secondary markets will develop quickly enough to permit subsequent corrections in the initial distribution of ownership rights, with the workers in particular cashing in early on their substantial capital gains. Unfortunately, there are some reasons to doubt that secondary markets will be able to play such a role in the near future.

The most serious obstacle to the creation of viable secondary capital markets in Russia is the potential lack of demand for the shares of the privatized companies. There are two reasons why a potential outside investor may acquire shares of an enterprise: to participate passively in the future income streams generated by the enterprise (through dividends or stock appreciation), or to acquire control of the firm and realize special profits due to entrepreneurial activity. In the conditions prevailing in Russia, however, it is not clear that an outside investor can expect to achieve either of these two goals.

The main reason why firms in capitalist economies must meet their commitments to outside minority investors (who do not have the power to control the firm) and respect their right to participate in the income streams produced by the firm is because the firm needs to generate capital. If the firm does not make a credible commitment to outside investors, its access to capital markets will be closed. Under current Russian conditions, however, the financing of large enterprises is done largely through the banks, which extend extremely generous credits backed by the close-to-unlimited printing capacity of the central bank. In this situation, until a credible stabilization program introduces greater monetary discipline and hardens the enterprises' budget constraint, insiders have every reason to distribute any profits of the enterprise in the form of wages, bonuses, and other compensation to themselves, rather than paying them to shareholders. Thus the system creates strong disincentives for outsiders to take stock positions in Russian enterprises.

The incentives for outside investors to acquire control positions in the privatized Russian enterprises are also problematic. To begin with, large concentrations of capital necessary for takeovers of large firms are not likely to exist for some time in any East European country. But even leaving this aside, there is a risk that the Russian state may not be able, at this time, to provide sufficient protection of property entitlements and to realistically enforce the right of significant external stakeholders to assert their effective control of large Russian enterprises. This risk is especially likely if an assertion of external control rights over a significant proportion of Russian enterprises were to lead to a threat of large-scale unemployment and labor unrest. Faced with such a prospect, the state is likely to step in to curtail, or even revoke, the control rights of the outside investors in order to prevent significant social dislocations. But this lack of credibility of the state's commitment to the enforcement of property rights is, in turn, likely

to deter outside investors from entering into the fray in the first place.

It is clearly too early to pass any definitive judgments on the success of the Russian program, especially with respect to the establishment of a clear and secure system of property rights. So far, the Russian program has resulted in a large degree of decentralization of economic decisionmaking, which is certainly not equivalent to the introduction of a governance structure characteristic of modern capitalist economies. Whether this decentralization will also turn out to be a genuine and lasting privatization is a matter that will become clear only with the passage of time.

Three early lessons

More generally, three tentative conclusions can be formulated on the basis of the first three years of the privatization experience in Eastern Europe.

First, the meaning of "privatization" in the context of Eastern Europe has turned out to be complex and often ambiguous. Instead of the expected clarification of property rights and the establishment of a system of economic incentives characteristic of a capitalist society, the intended privatization process has so far resulted in a maze of complicated economic and legal relations that may sometimes even impede a speedy transition to a system in which the rights of capital are clearly delineated and protected.

Second, the conflict between the interests of insiders, intent on retaining authority over their enterprises, and the right of outside investors to acquire control, has consequences that are often overlooked. While much attention has been devoted to this conflict, it has usually been analyzed in terms of the special historical and political conditions of Eastern Europe and in terms of the standard incentive problems associated with insider control. What is worth drawing attention to, however, is that insider control and barriers to the entry of outsiders may also retard the development of a system of clear property rights, including the rights of the insiders as owners of capital.

Third, there appears to be a hitherto unrecognized connection between the absence of monetary stabilization, with the associated soft budget constraints at the enterprise level, and the absence of a clear system of property rights to capital. By weakening the commitment of firms to fulfill their promises to the providers of capital, soft budget constraints contribute to a situation in which the rights of the owners of capital cannot be firmly established.

Seventy years of communism have not resulted in the predicted "withering away of the state." Perhaps not very surprisingly, the elimination of the inherited hypertrophy of the state in the postcommunist economies of Eastern Europe is also proving to be much more difficult than originally expected. ■

The authors are co-directors of the Central European University's Privatization Project, which operates in ten countries in Eastern Europe. They have recently co-authored The Privatization Process in Central Europe *and* The Privatization Process in Russia, Ukraine, and the Baltics, *both available from the Central European University Press, London, England.*

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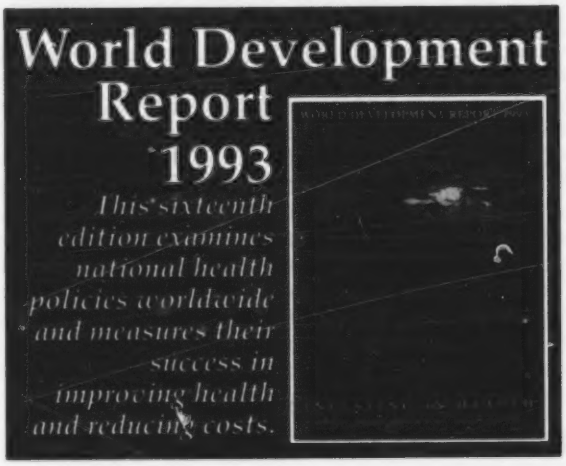
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Privatization: Expectations, Trade-offs, and Results

GERD SCHWARTZ AND PAULO SILVA LOPES

WHILE privatization has increased rapidly around the world, the results in many countries have fallen short of initial expectations, particularly of those who imagined instant riches or a fiscal panacea. In practice, privatization objectives are often in conflict, requiring trade-offs and compromises.

In view of the seemingly chronic ills that plagued state-owned enterprises around the world, a resurgence of economic liberalism during the 1970s resulted in the dismissal of economic models based on public monopolies. By the end of the decade, a sweeping privatization program was under way in the United Kingdom, and in the early 1980s, a new administration in the United States was pushing a broad deregulatory agenda. Soon, privatization programs followed worldwide. Privatization activity sharply increased over the past five years (Table 1), particularly in developing countries, raising total privatization proceeds from $2.5 billion in 1988 to $23.2 billion in 1992 (not counting privatizations in former East Germany).

Notwithstanding the perils on the road to a market economy, privatization has become a key part of economic reform and adjustment policies, and a prime mover of the economic transition of Eastern Europe. Often, though, an initial wave of unconditional enthusiasm generated by those who touted privatization as a nostrum for all economic ills has gradually given way to a more realistic view that not only identifies the economic benefits of privatization, but also recognizes the trade-offs and compromises that have to be made to obtain particular benefits.

Why privatize?

Economic theory recognizes public ownership as a response to the failure of private markets to secure efficient and equitable outcomes. Still, when the vast majority of enterprises is state owned, the framework that stimulates competition and efficiency may be missing. While the key objective of private enterprises is profit maximization, state-owned enterprises have to contend with multiple objectives that often conflict with profit maximization. These include general economic objectives—including control of strategic resources, delivery of essential goods and services, employment policies, and price control—and noneconomic objectives, ranging from social obligations to political patronage. Not surprisingly, then, when public and private sectors are compared in terms of the cost of producing similar outputs in a competitive environment, the private sector usually outperforms the public sector. Often, state-owned enterprises need to be kept afloat at taxpayers' expense, either through explicit government subsidies, such as direct cash grants, or through implicit subsidies, such as subsidized credit, guaranteed sales to the government at fixed prices, reductions of tax liabilities, government equity injections, or preferential exchange rates.

While there are different ways to improve the management of state-owned enterprises, for example by subjecting enterprises to market pressures, privatization is often seen as the best means to enforce market discipline and promote an efficient allocation and use of resources. But just privatizing enterprises is not enough: entire industries have to be restructured to ensure competitiveness if efficiency gains are to materialize; even for natural monopolies it will be necessary to introduce regulation and supervision to reproduce effective competition. Otherwise, privatized enterprises may be able to reap substantial monopoly profits, leaving consumers worse off. Hence, improvements in efficiency do not follow from privatization per se, but from the benefits that increased competition can bring to the marketplace if it is accompanied by industrial restructuring.

Trade-offs and constraints

Privatizing state-owned enterprises usually involves a number of economic, financial, and legal hurdles, as well as conflicting goals and interests that frequently impose constraints and make trade-offs inevitable.

Budgetary trade-offs. Economic theory tells us that privatization without efficiency gains does not improve a country's fiscal stance. This is because when a state-owned enterprise is sold at a fair market price, the value of sales proceeds should more or less equal the net present value of future after-tax earnings. Hence, when a profitable state-owned enterprise is privatized, the state obtains sales proceeds but forgoes future earnings; the opposite is true when a loss-making state-owned enterprise is privatized. In either case, all that takes place is a trade-off between current and future net proceeds. In government

Table 1

Sharp increase in privatization activity

Major worldwide sales of state-owned enterprises and state participations

	1988		1989		1990		1991		1992	
	Number of transactions	Million dollars	Number of transactions	Million dollars	Number of transactions	Million dollars	Number of transactions	Million dollars	Number of transactions	Million dollars
Industrial countries	...	36,773	39	20,946	...	17,897	...	31,058	...	24,388
Australia	...	1,450	2	87	—	—	2	1,820	2	1,297
Austria	3	999	3	315	1	55	1	38	1	162
Canada	—	1,882	3	824	4	990	3	713	5	1,217
Denmark	—	—	—	—	1	700	—	—	—	—
Finland	2	303	1	107	—	—	—	—	—	—
France	1	360	—	—	—	—	1	376	2	1,353
Germany	3	1,333	1	237	*	1,340	*	8,075	*	16,350
Italy	1	840	2	987	—	—	—	—	2	1,566
Ireland	—	—	—	—	—	—	2	489	—	—
Japan	1	22,800	—	—	—	—	—	—	—	—
Netherlands	—	—	4	2,100	—	—	2	150	1	100
New Zealand	6	1,846	3	869	7	3,803	—	—	5	1,052
Norway	—	—	—	—	2	127	—	—	—	—
South Africa	—	—	3	1,435	—	—	—	—	—	—
Spain	2	810	2	1,465	2	132	2	252	—	—
Sweden	—	—	1	3,820	—	—	—	—	1	253
United Kingdom	1	4,500	14	8,899	...	10,850	7	19,348	5	1,038
Developing countries	...	2,457	20	3,817	36	7,337	...	17,424	...	23,260
Argentina	—	—	—	—	4	2,119	2	1,022	8	6,200
Brazil	*	250	1	8	1	44	4	2,169	8	2,150
Chile	1	170	4	295	—	—	—	—	—	—
China	—	—	—	—	—	—	—	—	9	543
Colombia	—	—	—	—	—	—	1	52	—	—
Czechoslovakia	—	—	—	—	—	—	—	—	7	361
Greece	—	—	—	—	1	42	4	232	2	648
Hungary	—	—	3	130	1	32	97	180	*	845
India	—	—	—	—	—	—	—	—	*	261
Israel	1	95	1	53	1	74	—	—	1	235
Jamaica	1	19	1	42	1	42	1	42	1	23
Kenya	1	8	—	—	1	12	—	—	—	—
Malaysia	—	—	—	—	2	928	1	190	5	1,619
Mexico	4	1,915	1	140	4	2,410	12	9,400	10	6,374
Nigeria	—	—	—	—	3	13	—	—	—	—
Pakistan	—	—	—	—	—	—	—	—	1	82
Panama	—	—	—	—	—	—	1	23	—	—
Peru	—	—	—	—	—	—	—	—	1	120
Philippines	—	—	1	80	1	325	4	190	1	368
Poland	—	—	—	—	1	32	*	350	*	309
Portugal	—	—	4	494	5	796	5	1,014	4	1,023
Puerto Rico	—	—	—	—	—	—	—	—	1	142
Russia	—	—	—	—	—	—	—	—	1	50
Singapore	—	—	—	—	3	177	3	67	—	—
South Korea	—	—	1	2,100	—	—	—	—	—	—
Sri Lanka	—	—	—	—	—	—	1	13	—	—
Taiwan	—	—	1	285	—	—	2	405	2	1,363
Thailand	—	—	1	85	—	—	—	—	1	240
Turkey	—	—	1	105	4	267	—	—	2	304
Uruguay	—	—	—	—	1	15	—	—	—	—
Venezuela	—	—	—	—	1	9	3	2,055	—	—
Total worldwide	...	39,230	59	24,762	...	25,334	...	48,482	...	47,658

Source: Privatization International.
* Number not available because of block sales of small enterprises or government participations.
... Indicates data not available.
— Indicates no privatizations occurred.

accounts, net proceeds from privatization should preferably be treated as a loan repayment, but, alternatively, may be treated as capital revenue. Depending on what the government actually does with these proceeds, that is, whether—in the case of positive net proceeds—it reinvests them, uses them to retire outstanding public debt, or simply uses them as an opportunity to increase government spending or reduce taxes, the fiscal stance would at best be unaffected.

Policy trade-offs and constraints. What, then, should governments be expected to achieve by privatizing state-owned enterprises? While the potential for efficiency gains from private ownership usually provides the rationale for privatization, available evidence, particularly from large-scale privatization programs like the ones undertaken in Eastern Europe, suggests that these improvements in the allocation and use of resources may have

to be obtained at the expense of privatization proceeds. This would imply that the fiscal stance may not improve even when efficiency is enhanced.

In practice, policymakers wish to achieve a broad number of policy objectives, which may or may not be compatible with enhancing efficiency. Such objectives include privatizing the economy in the shortest possible time; maximizing privatization proceeds; selecting the "right" buyers; safeguarding employment; and obtaining investment guarantees. To meet all five objectives—speed, proceeds, ownership, employment, and new investment—the number of independent policy tools should equal the number of policy goals. Clearly, not all objectives can be achieved at once, and trade-offs and compromises are inevitable. For example, when a policy decision is made to privatize a given number of state-owned enterprises as quickly as possible—perhaps to obtain fast improvements in efficiency—any constraint imposed on the other four objectives will tend to slow down the process of privatization and limit the actual extent of efficiency gains.

The case of Germany

Germany provides a good example of the policy trade-offs inherent in all privatization schemes. The German privatization agency, the Treuhandanstalt (THA), was founded in March 1990 by the government of former East Germany as a fiduciary trust for state property. On July 1, 1990, the date of economic, monetary, and social union between East and West Germany, THA was instructed to demonopolize East Germany's industrial structure, privatize as many enterprises as possible, maintain a maximum of jobs, and seek new jobs for those who would lose their former jobs as a result of restructuring or privatization. This broadly defined mission seemed somewhat at odds with common tasks of a privatization agency, and in October 1990 when THA came under the control of West German managers and officials, the philosophy of the institution was streamlined to encompass "privatizing as quickly as possible, restructuring resolutely, and liquidating as carefully as possible," as described by THA's former president. This has been the philosophy of the institution ever since. It must be noted that THA has no explicit revenue objectives. In practice, the speed of privatization is clearly important; the decision to sell depends as much on the price that is offered as it depends on restructuring plans, particularly on promises of investment and job guarantees potential buyers are willing to give. With the focus on long-term benefits, the approach has meant that heavy short-term losses from privatization had to be tolerated.

The Treuhandanstalt: a look at a successful privatization agency

	1990	1991	Preliminary 1992
		(billions of DM)	
Total income	1.60	7.74	11.59
From privatization	1.52	7.41	9.47
Other income	0.08	0.33	2.12
Total expenditures	5.89	27.62	41.19
Privatization	0.04	1.09	4.58
Restructuring	1.34	13.21	10.90
Shut-downs	0.02	1.01	7.47
Administrative expenses	0.14	0.38	1.42
Interest expenditures		9.66	8.27
Legally mandated expenditures	4.35	1.57	8.55
Deficit (-)	-4.29	-19.88	-29.60
Guarantees issued	28.40	30.23	28.52
		(percent of GDP)	
Total income	0.07	0.30	0.42
Total expenditures	0.24	1.06	1.50
Deficit	0.18	0.76	1.08
Guarantees issued	1.17	1.16	0.99
		(other privatization results)	
Enterprises privatized (cumulative)	...	5,210.0	11,043.0
Completely privatized	408.0	2,700.0	5,251.0
Partially privatized	...	2,510.0	5,792.0
Remaining to be privatized	...	5,706.0	2,575.0
Guarantees obtained (cumulative)			
Employment guarantees (thousand)	201.0	930.0	1,401.0
Investment guarantees (billion DM)	42.9	114.0	169.5
Memorandum item			
GDP (West Germany only, billion DM)	2,417.8	2,612.6	2,790.0

Source: Treuhandanstalt.
... Indicates data not available.

THA's deficit grew from below 0.2 percent of GDP in 1990 to over 1 percent of GDP in 1992 (Table 2). In addition, during 1990–92, THA incurred contingent liabilities of around 1 percent of GDP in the form of state guarantees that were issued. The upside of what appears to be a serious financial problem is that THA has managed to privatize or partially privatize over 11,000 enterprises during 1990–92, obtain employment guarantees for over 1.4 million jobs, and secure investment guarantees amounting to DM 169.5 billion, or over 6 percent of the 1992 GDP of West Germany. Still, the restructuring plans that have to be presented create some rigidities, and it remains to be seen whether private buyers will actually follow through on employment and investment guarantees. However, there are stiff financial penalties for defaulting, and THA has taken to court companies that default on guarantees, thereby providing a clear signal that no reneging will be tolerated. Hence, to the extent that defaults on guarantees do occur, privatization-related proceeds are likely to increase.

Policymakers in Germany certainly had more freedom to select their desired policy approach among the available options than policymakers in many other countries, particularly in developing countries and in Eastern Europe. Few other countries would be able to finance privatization-induced deficits of the size of Germany's, at least not in a noninflationary way. This is particularly true for countries with embryonic financial markets. Hence, countries with severe domestic financing constraints will be forced to pay more attention to privatization proceeds. This is likely to reduce the extent of efficiency gains, since it slows down the process of privatization and excludes a number of policy tools and strategies from being applied, most notably mass privatization. To prevent undue reductions in speed from limiting the extent of efficiency gains, a strong case may be made for broad international financial support of privatization and

restructuring efforts in developing countries and in Eastern Europe.

Some emerging trends

How have policymakers responded to these various constraints and trade-offs? While countries have reacted quite differently, some common trends are emerging.

One common trend, which is particularly pronounced in countries where the private sector had long been stifled, is that privatization has been embedded in a program of broad liberalization and reform. These measures have ranged from creating the foundations of private sector development, such as legalizing private ownership and enacting bankruptcy laws, to measures indirectly related to privatization, such as reforming the banking sector and liberalizing the current and capital accounts of the balance of payments, thereby allowing for freer trade and foreign capital flows. Rapid progress in these areas is as important to the development of a vibrant private sector as privatization itself.

In Poland, for example, where progress on privatization has been relatively slow and reprivatization—that is, restitution of nationalized property to their former owners—remains undecided, the private sector accounted for close to 60 percent of employment and almost 45 percent of GDP in 1992, compared with less than 30 percent of GDP in 1989. In the former Czechoslovakia, where the private sector was only legalized in late 1990, but which has emphasized rapid and extensive privatization and reprivatization, the private sector accounted for 16–20 percent of GDP, compared with about 10 percent in 1991. In many other countries, including many of the states of the former USSR, privatization policies are implemented more slowly, and private sector growth has often proceeded independent of explicit privatization measures. Still, this growth is concentrated in specific sectors, such as retail trade and construction, but not in industry, where state ownership remains dominant.

A second trend, particularly pronounced in countries where policymakers want to pursue a range of policy objectives simultaneously, is to divide state-owned enterprises into different groups, and to pursue separate and specific privatization goals for each group of enterprises. Poland's privatization program, for example, aimed at, inter alia, being a key mover of a rapid transition to a market-based economy, while preventing sales at unduly low prices; enhancing corporate governance and the efficiency of labor, capital, and management skills; improving the fiscal stance; ensuring a wide diffusion of private ownership; and being a key element of the program of debt-equity swaps. While some of these objectives have since been modified or dropped altogether, others have been added, such as the need to give specific consideration to various population groups, including workers, pensioners, and state employees. This is not unlike other countries' experiences where privatization is, implicitly or explicitly, becoming part of a broader discussion on distributional questions. In general, the more objectives that have to be satisfied, the more compartmentalized privatization schemes become in practice. As a result, in Poland, as in many other countries, privatization schemes have evolved into highly differentiated multidimensional arrangements, where new owners are carefully selected for some enterprises, prices are maximized for others, a strict time frame is pursued for yet another group, and investment guarantees or employment is safeguarded in yet a further group.

A third trend, and largely a corollary to the first two, is the broad mix of privatization tools used by most countries. This includes special programs for small enterprise privatization, enterprise liquidation schemes with asset sale or auction, leasing arrangements for state assets, management/employee buy-outs/buy-ins, direct sales via trade sale or a public share offering to foreign or domestic investors, restitution to previous owners, and mass privatization. Usually, these tools are tailored to match particular privatization objectives. One-by-one asset auctions, for example, are most appropriate when policymakers wish to maximize privatization proceeds; special employee or management buy-out or leasing schemes target specific groups of potential buyers; mass privatization, designed to spread ownership rights of a large number of enterprises among the population, clearly emphasizes speed as a primary objective. Since mass privatization schemes eventually involve distributing a large number of ownership titles to the population, they are likely to work best in countries with developed domestic capital markets. Given the small size of their domestic capital markets, even countries like the former Czechoslovakia, which emphasized speed as a primary objective and therefore selected mass privatization as a key policy tool, had to adopt a diversified approach to privatization that included many different tools.

A caveat is in order, however. While designing various tools and techniques has helped to tailor privatization schemes to particular groups of potential buyers, it has also complicated them, and, sometimes, the multiplication of tools has not been well controlled by governments, allowing insiders, usually company managers, to exploit the privatization process for their personal gain.

Conclusion

Privatization results have fallen short of expectations, particularly with respect to privatization proceeds; but, more likely, expectations were exaggerated to begin with. Evidence suggests that efficiency gains that are needed for improving a country's fiscal stance will only materialize if privatization is accompanied by extensive industrial restructuring. Since this is costly, efficiency gains may only be achieved at the expense of net proceeds from privatization. In addition, policymakers may wish to pursue a broad range of policy objectives and, hence, may need different tools to tailor privatization to investors' needs and ease some of the trade-offs. The range of possibilities is usually constrained by the availability of domestic financing, and, in the absence of international support, policymakers may have to give priority to budgetary considerations. ■

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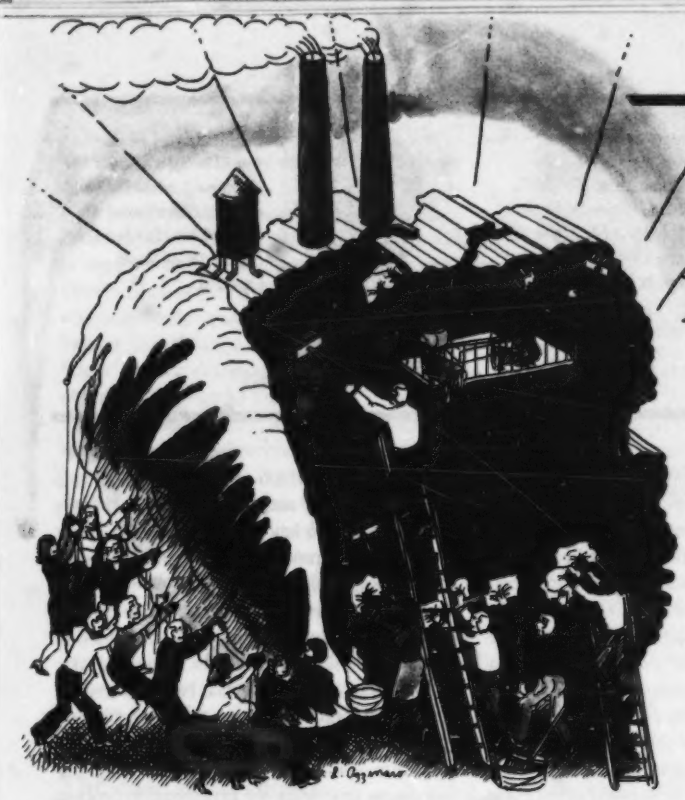
For a more detailed discussion, see Gerd Schwartz, "Privatization: Trade Offs, Experience, and Policy Lessons from Eastern European Countries," in Vito Tanzi's (ed.), Transition from Central Planning to Market Economies: Case Studies in Fiscal Reform *(IMF, May 1993), and Paulo Silva Lopes, "Privatization, Indebtedness, and Fiscal Performance: A Budgetary Model and Recent Experience in Developing Countries" (IMF Working Paper, forthcoming).*



Prejudice and Fact in Poland's Industrial Transformation

IAN M. HUME AND BRIAN PINTO

CONTRARY to the commonly perceived stereotype of state-owned enterprises as passive and non-responsive, there is evidence to suggest that in Poland, state companies are adapting to new realities with considerable vigor. A World Bank study on the experience of 75 large state-owned enterprises shows that the industrial recovery is based on solid microeconomic adjustment.

Three years into Poland's "big bang" economic reforms, evidence shows state enterprises to have been more responsive to new economic realities than the prejudice of a passive, failing state sector would indicate. State-owned enterprise (SOE) behavior and reform remain vital for medium-run growth, not only in Poland but also in other reforming countries where the state manufacturing sector typically accounts for a high share of GDP, employment, taxes, and exports. While conditions are different in different post-communist countries, Poland's experience as a front-runner offers some useful lessons.

Privatization of large manufacturing companies is not an easy task, especially on the scale required in the former centrally planned economies of Eastern Europe. In 1990, many argued that state assets should be rapidly privatized. Any delay would mean wasted time and when privatization was finally implemented, there would be nothing left to privatize. This view was based on the popular image of SOEs as sluggish in adjusting to the new economic realities and resistant to restructuring.

A survey (see box) of 75 companies, all of which were SOEs at the start of the Polish reforms, was conducted in mid-1991. It was repeated a year later, with 64 returning the filled-in questionnaire that contained monthly information on all conceivable variables of interest, including sales, costs, profits, wages, bank borrowing and interfirm credit, tax arrears, excess wage tax penalties (paid on wages in excess of a legislated norm wage), and so on. These firms were from five manufacturing sectors—metallurgy, electromachinery, chemicals, light manufacturing (textiles, leather), and food processing. By mid-1992, of the 64 responding companies, 3 were privatized, 24 were commercialized (but 100 percent treasury-owned joint-stock companies, nevertheless) and 37 were still SOEs. Out of the group of 39 best performing companies, 2 were privatized, 14 were commercialized, and 23 were SOEs.

The survey data show firms to have been vigorous in their responses. The results indicate that some companies are capable of adjusting, restructuring, and expanding profitable sales prior to privatization. It would be wrong to conclude from this that privatization is either unnecessary or can be infinitely delayed. On the contrary, by taking the initiative, many companies have enhanced their viability and increased their value as privatizable assets, while some have not. In the case of Poland—where there are different privatization tracks for companies of different degrees of viability—this divergence of experience may make it easier to identify which track will suit which company.

Evidently, hard budgets and import competition—key ingredients of Poland's reform program—can lead SOE managers to restructure companies even when privatization and better managerial incentives lag behind. Interviews with managers and other evidence suggest four factors are playing a crucial role in the transformation:

- the government has held a consistent economic policy line (despite periodic political instability) right from the start of the reform on January 1, 1990. SOE managers became convinced by mid-1991 that the government had neither the intent nor the resources for bailing them out and that they must therefore make it on their own;

• rapid trade liberalization and the elimination of subsidies quickly clarified price signals, forcing firms to focus on efficiency, marketing, and profits, in contrast to the obsession with the production target in the former centrally planned regime;

• commercial bank behavior changed sharply following improved supervision and control, which was implemented in late 1991 (some 21 months after the big bang), diminishing the adverse selection of loans and directing resources to better firms; and

• SOE managers became familiar with operating in a market environment and see their future and reputation as inextricably linked to the success of the firm, either when privatized or as is.

Enterprise behavior

Based on the data collected, the survey was able to establish a number of broad findings reflecting the dynamism of enterprises.

Sectoral differences. In 1991, the success of enterprises depended largely on their manufacturing sector. By 1992 it was common to find within each sector some enterprises doing well, others less well. This is a clear sign that the prereform allocation of resources is now bending to market forces. Initially, sectors were resilient to the reform shocks, depending upon various starting points, such as dollar accounts and inventories carried over; and favored access to the captive former Council of Mutual Economic Assistance (CMEA) market and cheap inputs and energy, which lasted until March 1991. Now factors within each enterprise (management actions, and others) rather than sectoral origin are becoming the main determinant of performance.

Enterprise performance. Data from the first six months of 1992 were used to classify the 64 enterprises into three groups: those that exhibited positive retained earnings after payment of all taxes and penalties (AAA—31 firms); those that showed positive pre-tax profit only (AA—8 firms); and those with negative pre-tax profit (A—25 firms). The chart shows the profit trends in these three groups of firms in the period from the end of 1989 to mid-1992 (the profit rate on the basic business of firms, abstracting from sales of assets and net extraordinary gains). Remarkably, the AAA firms have been able to maintain a steady rate of underlying profitability throughout. These firms also had the earliest recovery in sales, showed wage restraint, were conservative in borrowing from banks, and were the most likely to stress product mix changes as a factor stimulating sales.

Adjustment measures. All three groups of firms showed declining sales and rising finished goods inventories in 1990 and 1991, although AAA firms had a smaller adverse experience. Therefore, all firms were under pressure to react to the sharply changing conditions in the economy during this period. There were the shocks of the reform process—hard budgets, new relative prices in the goods market, free trade—and the shocks coming from the collapse of the CMEA—realistic input prices and collapsed markets.

The data from the survey show how these firms have responded to these shocks, as measured by a number of indicators.

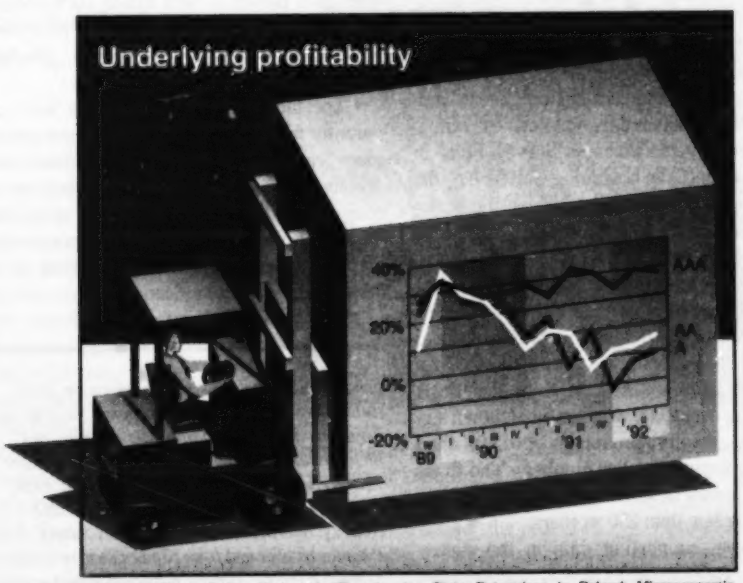
Labor and unit cost management. All the firms surveyed had made significant adjustments in labor force and wage behavior, the sample as a whole having trimmed the labor force by 27 percent between September 1989 and June 1992. But neither labor shedding nor wage restraint alone explain the financial success of the best companies. The best, in fact, shed relatively fewer workers and paid the highest wages. However, since they were successful in securing an earlier recovery in sales their productivity was higher and their unit costs lower.

Materials and energy management. All firms managed to reduce the consumption of materials and energy per unit of sales. Comparing the first half of 1991 with the first half of 1992, the 31 best companies had reduced this consumption by some 22 percent, the remaining companies by some 17 percent.

Credit management and arrears. There is significant evidence to distinguish the behavior of successful from unsuccessful firms, based on their management of investment and operating credits. In the case of the least successful firms, again, a poor sales record was reflected in a high (and growing) level of inventories, which drove these firms to high levels of borrowing compared to sales. By June 1992 these firms had working capital loans of over 200 percent of the costs of sales, compared to less than 90 percent for the best firms. Since the least successful firms had also invested at about the same rate as the most successful, these firms were left with a huge interest burden, measured by interest payments as a share of profits before interest and taxes. Beyond mid-1991, the least successful (A) firms as a group were unable to meet their interest payments, while this burden never exceeded 50 percent for the best (AAA) firms. The most successful firms had much lower tax arrears (less than 4 percent of taxes due in mid-1992) compared with the least successful (close to 51 percent in arrears). The best firms were also net lenders to other enterprises, not borrowers (as were the least successful).

Company decapitalization. The notion that state-owned companies will tend to decapitalize themselves by favoring excessive wage payments is not borne out by evidence in the companies surveyed. Investment exceeded depreciation in all but the least successful firms. Even in the latter, the shortfall can hardly be attributed to excess wages since the wage penalties (which were up to 500 percent of a given wage increase) were only a small fraction of resources available to pay the excess wage tax ("disposable cash").

Export diversion. It was always assumed that firms with a long history of production for sales under contract to customers in the CMEA would find great difficulty in penetrating alternative export markets, following the



Source: Pinto, Belka, Krajewski, "Transforming State Enterprises in Poland: Microeconomic Evidence on Adjustment."

CMEA collapse. Such difficulties are no doubt real for many firms, but the survey found that in two major export sectors (metallurgy and chemicals) fully 91 percent of hard currency exports of surveyed sample firms consisted of diverting the same products to western markets; 89 percent before the collapse of the CMEA in 1990/91. While this diversion is encouraging, as it meant a concerted marketing effort, the evidence questions the presumption that more exports means more adjustment. Metallurgy and chemical hard currency exports in 1990 were of standardized products underpinned by cheap inputs from the former Soviet Union under CMEA trade. Many of the adjusted firms in the sample were primarily selling on the domestic market under the competitive pressure of low import barriers.

These findings suggest that managers have shown considerable willingness to adjust. In fact, all firms have undertaken adjustments; firms at the bottom of the heap shed the most labor. These firms, however, are also beleaguered by the biggest debt overhang and highest excess employment. The extent to which adjustments have led to profitability has therefore varied. The single factor that seems to have separated the successful from the less successful firms is final sales performance. Unfortunately, we know too little from the survey about why some firms could sell and others not, although managers of AAA firms were the most likely to stress product mix changes as a factor stimulating sales.

All firms have been driven to respond with varying degrees of success to the tightening of budget constraints and the relative price shock that were key elements in the Polish reform package. Opinions were always divided on whether such stringency alone would be enough to bring a real restructuring of the enterprise sector or whether, as others believed, a specific micro-intervention was needed to change the governance of the enterprise by commercializing/privatizing it, as a pre-condition for its restructuring. The latter concern has been driven by the fears that firm-level incentives, in particular managerial compensation, are not consonant with the long-run health of the firm; that the limbo status of firms between announcements of government intentions to rapidly privatize and actual implementation would prompt decapitalization; and that in any event, managers lacked the expertise for restructuring. It is, therefore, intriguing that managers of AAA firms with no personal stake in the company akin to the incentives that would exist in a market economy comparator are performing well; and indeed that managers of SOEs in general are defying the stereotype of an inert sector.

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Overall supply response

Of course, 64 firms is a small sample on which to base conclusions for the whole of Polish industry. However, other evidence tends to support the thesis that state sector companies have adjusted and are entering a recovery phase, which represents the "supply response" to the reform package imposed in early 1990. The Business Survey in Poland, which tracks anticipated industrial performance based on a poll mainly of SOEs, indicates growing optimism. Expectations of better performance indicated by the survey are corroborated by seasonally adjusted industrial output data, which indicate a systematic recovery starting in 1992.

Further, it is interesting to note a number of other features in the performance of this sample of 1,200–1,500 mainly state-owned companies polled by the Business Survey. First, in the period since the beginning of 1992 (i.e., the sharp recovery period), it has been the heavy industries and the larger firms that have been among the leaders in the process. The industries that have performed above the average of all branches have been: ferrous and nonferrous metals; transport equipment; textiles and clothing; glass and pottery; and the food industry. In addition, the data show that firms employing over 2,000 workers have shown significantly greater production growth than those employing smaller numbers. The firms with the lowest production growth were those employing less than 250 workers.

Moreover, supporting data in the survey show in various respects that the sampled companies are exhibiting aggressive market behavior. In 1992, orders for both domestic sales and exports grew by some 20 percent; the number of companies reporting increased difficulties selling their products fell by half; about the same was reported by companies selling in export markets. The number of companies reporting higher profits from exports increased by 6 percent; those reporting lower export profits declined by some 4 percent. These findings do not support the popular "albatross" conception of the large state-owned company in the heavy industry branches. Although there undoubtedly are many SOEs in difficulty, there is also an element of dynamism contributing vigorously to the supply response.

Interpreting the evidence

The data support the following broad conclusions:

- Thanks to the maintenance of a disciplined macro framework, the Polish reforms are working, as evidenced by the systematic supply response based on increasingly competitive activities.
- The state sector enterprises, many of them in heavy industry branches, are among those leading the recovery, giving added weight to the sustainability of reform.
- Although SOEs have undertaken (spontaneous) restructuring of various kinds, it would be wrong to conclude that changes in the governance of such enterprises—by commercialization and privatization—are unnecessary or could be delayed. Instead, the survival and future health of these enterprises is now more assured because they have recognized and acted upon the need to take their future into their own hands; to this extent such companies are better placed to accelerate their commercialization and privatization through whatever means.
- The fact that small companies have apparently fared less well than large companies gives cause for concern. Since most new private companies—whose growth is to be encouraged in the new Poland—are small, the question arises as to whether there are special barriers to such companies that need to be addressed. ■

For a detailed analysis see "Transforming State Enterprises in Poland: Microeconomic Evidence on Adjustment" by Brian Pinto, Marek Belka, and Stefan Krajewski, Policy Research Working Paper 1101, The World Bank, March 1993, and forthcoming in the Brookings Papers on Economic Activity. *Information on the Business Survey Poland was obtained from Kuniunktura w Przemysle Polska; Instytut Rozwoju Gospodarczego, Szkola Glowna Handlowa, December 1992.*

Reforming Social Security Systems

GEORGE KOPITS

WHAT are the causes and nature of the crisis faced by many social security systems around the world? And is there a case for reforming them in the framework of IMF-supported adjustment programs? Indeed, a cost-effective social security system that provides maximum protection at the least cost in terms of fiscal resources and allocative distortions would help ease the adverse impact of stabilization and structural reform efforts.

Many social security systems worldwide are currently in a crisis, providing inadequate protection while imposing a heavy fiscal burden. A crucial policy issue, therefore, is how lives and livelihoods can be made more secure against deprivation, particularly during a period of structural adjustment. While industrial countries have begun to deal with these problems, most developing countries and postsocialist countries undergoing market-oriented transition need to reform their social security systems as part of economywide adjustment programs. Accordingly, policymakers need to explore fiscally sound yet socially effective approaches for the provision of social security—that is, social insurance (public pensions, unemployment compensation, health care) and social assistance (primarily targeted benefits).

From promise to crisis

Over a period spanning nearly a century, earnings-related social insurance (mainly public pensions and unemployment compensation) and limited forms of social assistance were established first in Europe, followed in the Americas, and later, to a lesser extent, in other continents. Until the 1970s, social insurance schemes prospered financially and gained considerable popularity, as the first generations of enrolled retirees and unemployed were able to benefit in amounts that often far exceeded their contributions during relatively short service periods.

Accumulated reserves of the social security system were often used to finance government budget deficits, at practically no interest yield, with little regard for the long-term sustainability of the system. In addition, reserves of public pension funds were partly earmarked to cross-subsidize health care and other noncontributory schemes, or were invested in projects with highly questionable rates of return. Given the continued expansion of the contributing workforce, this approach may have seemed justifiable for partially funded programs; the main preoccupation was with maximizing coverage of the enrolled population rather than with long-term financial stability and intergenerational equity. Whatever financing difficulties emerged, there was scope for solving them with stepwise increases in payroll-based contribution rates.

Provision of social assistance, including health care, for the poor was uneven across countries. In industrial countries, a more equitable income distribution was sought primarily through highly progressive personal income taxation and selected categorical subsidies. In many

developing countries, price controls on key foodstuffs and other "essential" products, as well as interest rate ceilings, proliferated on equity grounds. The accompanying subsidies were financed from general budget revenue.

It was largely the first oil shock that exposed the financial imbalances that underlay the social security programs of many developing countries, in the context of severe macroeconomic disequilibria. Mounting inflationary pressures, rampant commodity shortages, external payments difficulties, increasing indebtedness, and a marked slowdown in growth revealed major structural rigidities. Social security institutions came under financial stress. The real value of benefits was eroded by inflation, while new rounds of payroll tax rate hikes plus budgetary injections were needed to ensure financial solvency, in effect on a pay-as-you-go basis.

These financial problems have been compounded by generous eligibility for benefits granted on the basis of political expediency rather than past contributions or genuine need. Some countries started to face the potentially most costly social security provision—universal access to health care, with few or no qualifications. Excessive claims for sick pay, partial disability pensions, early retirement pensions, length-of-service pensions, and health care benefits have been on the rise in a number of countries; in particular, they placed an unsustainable burden on developing countries facing major macroeconomic imbalances. Meanwhile, the contribution base in the latter countries began to shrink, partly because of a slowdown in real income growth in the formal sector. Further, the rise in the benefit-contribution ratio has been exacerbated by the turnaround in demographic trends, driven by declining birth rates and rising life expectancy, the full repercussions of which have yet to be felt. The typical policy response in many countries—sometimes as a conditioned reflex—has been to raise statutory contribution rates further.

These developments, along with a lack of transparency and accountability for social security finances (often combined with corrupt and inefficient administration), weakened the perception of any linkage between benefit eligibility and contribution record and, thus, undermined compliance with what has come to be regarded increasingly as an onerous form of regressive payroll taxation. In turn, incorporation of high payroll tax rates in labor costs contributed to erosion of the taxing country's international competitiveness—absent border tax adjustment for such taxes, under the destination principle, in foreign trade—imposing yet an additional burden of adjustment on the exchange rate.

The social security crisis is nowhere more acute than in the postsocialist economies of Eastern Europe and of the former Soviet Union. In these economies, social security schemes have become grossly dysfunctional, owing to rigid ideological constraints. In the past, unemployment was hidden through large-scale redundancies in state-owned enterprises and through relatively easy eligibility for various social insurance benefits (especially low retirement age, and generous sick pay and disability benefits), given the lack of unemployment compensation. The primary vehicle for poverty alleviation took the form of price subsidies to satisfy merit wants—available to all, regardless of need.

At present—even after the official recognition of unemployment and poverty and the creation of specific schemes to deal with them openly—the dysfunctional treatment of unemployment in most transition economies seems to have been aggravated by increased recourse to early retirement and disability benefits. At the same time, these economies—lacking the necessary administrative capacity—are singularly incapable of delivering social assistance to the needy. This is because social security programs were run by state-owned enterprises; as these enterprises become increasingly exposed to market discipline and shed redundant labor, a rapid increase in poverty occurs.

"The social security crisis is nowhere more acute than in the postsocialist economies of Eastern Europe and of the former Soviet Union."

The case for reform

In an effort to correct macroeconomic imbalances—reflected in external current account deficits and high inflation—a number of developing countries embarked in the late 1970s on comprehensive adjustment programs that, besides short-term stabilization, were aimed at bringing about structural reform. The latter consisted mainly of liberalizing commodity prices, interest rates, and the exchange rate; financial and fiscal reform; overhauling or privatizing state-owned enterprises; and liberalizing foreign trade and payments. Governments recognized that the magnitude and nature of such structural changes, in combination with fiscal and monetary restraint, could have a significant short-run adverse impact on incomes and employment. Such an outcome is inherent in postsocialist economies undergoing market-oriented transformation.

Clearly, the removal of subsidies to loss-making public enterprises and the phaseout of consumer subsidies (especially those involving foodstuffs) to households can create an immediate deterioration in social conditions as compared to the status quo ante. Arguably, however, under most adjustment programs living conditions improved in comparison to the relevant counterfactual situation—characterized by widespread shortages, hoarding, falling real incomes, and black market activities—which was unsustainable given domestic financial disintermediation, output contraction, and capital flight. Moreover, market-oriented structural reform combined with stabilization would lead to sustainable economic growth in the medium term.

Beginning in the second half of the 1980s, the IMF sought to deal with the social consequences of adjustment programs in an active and systematic manner. In essence, the underlying rationale was the necessity to buttress the social and political acceptance of the adjustment effort with an explicit effort to contain adverse short-run distributional implications. As part of its appraisal of macroeconomic policies, the IMF staff began to examine the possible consequences of the stance and mix of key adjustment measures on socioeconomic conditions in member countries, and to identify ways of strengthening the social safety net for adversely affected groups. This initiative focused primarily on easing the temporary impact of such measures on the poorest strata in low-income countries.

More recently, increasing attention has been paid to comprehensive social security reforms in the context of structural adjustment. At the request of member countries, the IMF provides technical assistance to support such reform. Since 1989, at least a dozen member countries received technical assistance for designing and administering social security schemes—public pensions, unemployment compensation, health care, and social assistance. In addition, social security reform measures, along with other structural fiscal reform measures, have been increasingly incorporated in IMF-supported adjustment programs.

Options and constraints

The main goal of social security reform is cost effectiveness—meaning "the biggest social bang for the fiscal buck"—based on the

premise that social security can no longer be viewed simply in terms of the magnitude and coverage of benefits, but must be assessed also in terms of fiscal cost and allocative efficiency. In other words, a cost-effective social security system provides maximum protection at the least cost in terms of fiscal resources and allocative distortions and contributes to macroeconomic balance. This fundamental criterion for reform encompasses a range of considerations, with implications for the design and implementation of the system. More specifically, it allows for a variety of reform options while being subject to a number of limiting constraints.

First, it is necessary to take into account explicitly the relevant cultural and social characteristics, as well as historical antecedents, of each country. Obviously, these characteristics shape behavior, attitudes, and aspirations with regard to the provision of social services. At one end of the spectrum, there are societies where the extended family or village structure still operates rather actively as an informal social security scheme, obviating the urgent introduction of large-scale public pensions and assistance schemes. The example of certain Asian countries (such as Indonesia, under the *gotong royong* principle), and to a lesser extent, Mediterranean countries, illustrates this approach. At the other end, in countries where households have been atomized and informal self-help arrangements have been weakened or broken, there is an immediate need to provide an extended social safety net. This is the case, for instance, in much of the former Soviet Union, where the individual has been made totally dependent on the state, through his or her workplace—while facing virtually insurmountable barriers to mobility.

Second, for the sake of allocative efficiency, administrative simplicity, and increased labor mobility, social security provisions should be uniform across occupations and economic activities, including the government workforce. Unless justified by clearly differentiated risk, eligibility for benefits, benefit levels, contribution rates, and the degree of subsidization, if any, should be uniform. Moreover, social insurance schemes (including Chilean-type government-mandated private pension funds) can be supplemented usefully with voluntary private insurance and retirement funds. In addition, nongovernment initiatives—by charitable, religious, or other organizations—that provide valuable assistance to the indigent, deserve support.

Third, there is a need to tailor the social security system to a given country's level of economic development and labor market conditions. To promote labor force participation in the formal sector, it is necessary to remove impediments and disincentives to employment, including high payroll tax rates, in that sector. Besides strengthening the links between benefits and wage-based contributions, contribution rates should be kept relatively low in a low-wage, labor surplus economy. Furthermore, inadequate administrative capacity makes the provision of means-tested social assistance in many developing countries difficult.

It cannot be overemphasized that social security reform should be geared to the eradication of excess consumption and waste of scarce resources. With few exceptions, open-ended consumer price subsidies should be abolished and replaced by means-tested transfers. Given administrative limitations, such as those prevailing in some developing or postsocialist economies, it may be necessary to resort to various forms of categorical transfers to well-identified groups (for instance, households with children and elderly), possibly in the form of benefits in kind. In addition, automatic indexation of benefits for inflation is fully justified for equity reasons. Health care provision is another area of considerable potential for saving through various cost containment techniques. In particular, improved management practices, stepped-up preventive programs and education, increased information about medical and hospital costs for both health care users and providers, cost-sharing, and user fees and supply incentives, should help reduce abuse and waste.

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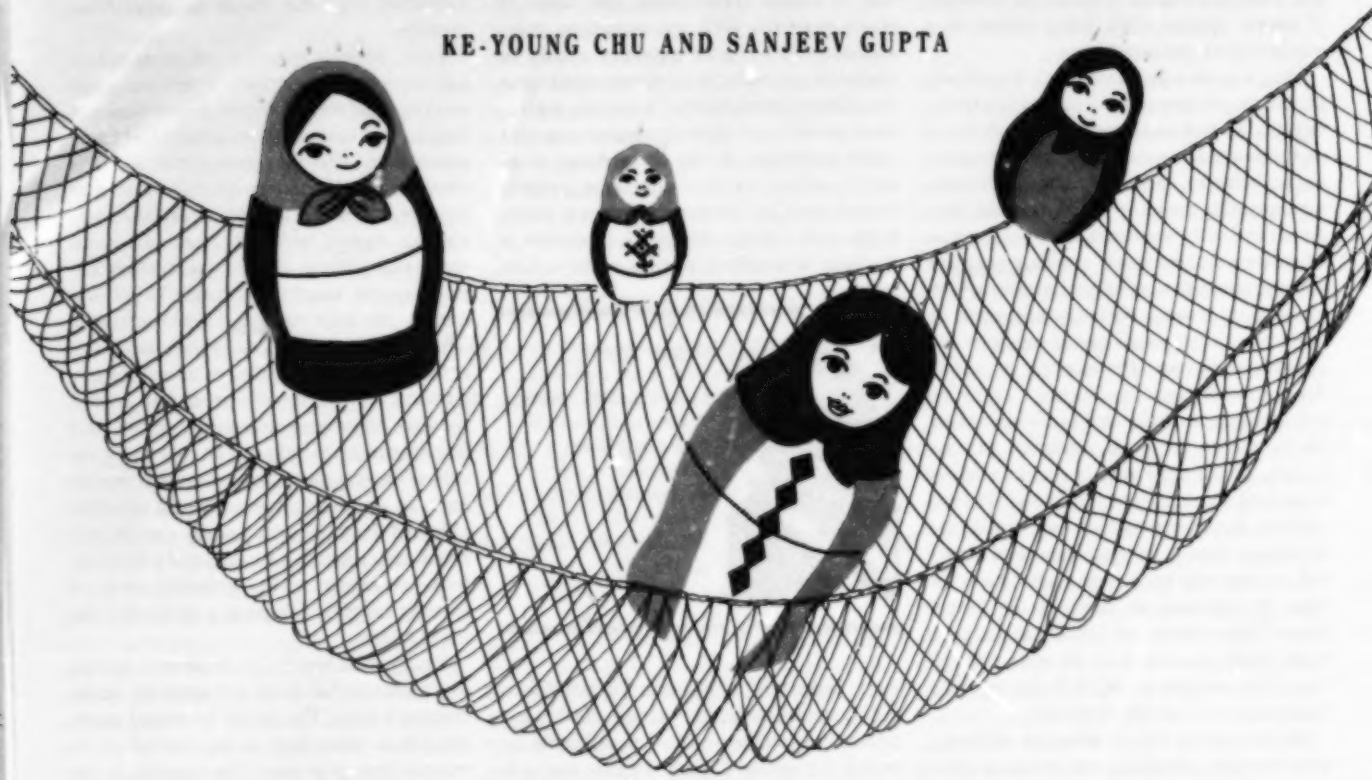
Fourth, there is a need for a clear institutional distinction among social security schemes by function or purpose: old-age, disability, and survivors' pensions; unemployment compensation; health-care services; and poverty alleviation. Separation of social insurance programs and social assistance programs, notwithstanding some inevitable overlaps, helps to differentiate their characteristics so that the public may better understand the purpose of each program, and promotes accountability for each program. Such a functional distinction implies that public pensions should not be used as a form of unemployment relief—through a low retirement age or easy access to early retirement benefits and disability benefits. This differentiation also has implications for the sources of financing. Social insurance programs (old age, disability, unemployment) should be financed primarily with wage-based contributions by the insured employee and by the employer on his or her behalf, supplemented by income from reserves created with such contributions. By contrast, the main source of financing for social assistance programs should be general tax revenue.

Fifth, besides ensuring social protection and fairness for the present generation, social security must seek an equitable distribution of benefits and costs between present and future generations. This intergenerational aspect is often neglected in both industrial and developing countries owing to political expediency or concern mainly with short-term macroeconomic disequilibria. Public pension programs, in particular, should be financially self-sustaining over long periods of time, capable of withstanding considerable demographic and economic fluctuations. Viewed as an intergenerational contract, a public retirement scheme commits future generations that do not have an opportunity to influence or vote on the design of the present system, to support preceding ones. An overly generous benefit structure inherited from the past usually can be corrected only through a gradual and painful reform, including costly grandfathering of existing benefits, following a protracted national debate.

Finally, it is imperative to observe certain constraints on the speed and scope for implementing reform. The size of the formal sector imposes an outer limit on the coverage of insurance-type programs. The capacity to administer the collection of contributions and the disbursement of benefits imposes an even tighter limit in the short run. Although not bound to the formal sector, the delivery of social assistance is determined chiefly by fiscal resources and administrative capacity. Equally important for the success of the reform—especially against a record of unfulfilled expectations—is the institutional transparency of social security operations and accountability of management. In this respect, the creation of well-administered public trust funds (one for each social insurance program) can make an important contribution to credibility and popular acceptance. A binding constraint, particularly on health care and social assistance programs, as well as on the extent of grandfathering during the transition to a new system, is the availability of fiscal resources. ■

Protecting the Poor: Social Safety Nets During Transition

KE-YOUNG CHU AND SANJEEV GUPTA



WHILE making the move toward a market-oriented economy, the states of the former USSR must deal with the transitory adverse effects of reform measures on vulnerable groups. Social safety nets—a critical component of a reform program—rank among the most complex yet urgent tasks in the transition.

As the states of the former USSR struggle to establish a market-oriented economy, their first steps are marked by disquieting cuts in incomes and jobs—the results of a disruption in interstate trade and consequent reductions in output reinforced by reform-induced adverse effects. Even more disturbing are indications of reductions in real incomes of the existing poor groups and the emergence of new poor groups. Particularly vulnerable are families with workers earning minimum wages, pensioners, workers who are either unemployed or about to be unemployed, and children.

For market-oriented reforms to be politically viable, adverse impacts on vulnerable segments of society must be mitigated. The key issues, therefore, are whether the most vulnerable can be shielded during the transition period from an unacceptable decline in their living standards and how existing social protection arrangements can be reformed to help tide them over the transition period. While the socialist legacy provided for an overly generous level of benefits to some, these social protection arrangements cannot be sustained without destabilizing budgetary positions. Hence, reform requires designing cost-effective safety nets—from the range of existing social protection tools in these countries—to accommodate market and budgetary realities. The challenge ahead is not only of an economic but also of a political and social nature.

Social safety nets, in this instance, are instruments to help the poor avoid getting poorer as a result of reform measures. They are not necessarily permanent social security

What Poland can teach

The Eastern European experience—particularly of Poland—can provide some useful lessons for the states of the former USSR. The Polish experience stresses the importance of:

Ensuring that safety nets are an integral part of a reform program. Largely due to ease of access, the brunt of the reform-induced increases in social expenditures in Poland was borne by pensions and unemployment compensation, rather than by social assistance schemes targeted to the vulnerable. So far, reforms of social expenditures have largely assumed a reactive character, and measures have been taken when existing policies became unsustainable. This approach has been disruptive as policy measures were frequently perceived as revoking or eroding entitlements.

Targeting social expenditures. During 1989–92, a rationalization and targeting of subsidies helped to reduce budgetary outlays: overall subsidies—including, for example, subsidies for foodstuff, coal, housing, transport, and to private farmers—were cut by more than 10 percent of GDP. This reduction enabled the government to expand other social programs.

Formulating an efficient unemployment compensation scheme. During 1989–92, unemployment increased from virtually zero to close to 14 percent of the labor force, largely because of labor shedding. However, liberal eligibility criteria and attractive benefits also contributed to a surge in registration of new entrants (e.g., housewives and school leavers) as unemployed. This problem was addressed by introducing flat benefits and by limiting their duration, and by expanding emergency support programs for the long-term unemployed.

Reforming pensions. During 1989–92, pension expenditures increased from just over 8 percent of GDP to close to 15 percent of GDP, partly because the retirees were allowed to continue close to full-time work without loss of pension. Together with liberal disability provisions, this meant that the average retirement age dropped by about two years. While pensions for early retirees were somewhat limited by legislation in 1991–92, it has been generally difficult to reform pensions. This is mainly because the issue of pension reform has often been discussed in isolation from the general task of reforming the social safety net in a way that would provide adequate provisions for life-cycle and other contingencies.

Adopting administratively simple benefits. The Polish experience shows that the ratio of cash benefits to wages can be volatile, suggesting administrative difficulties in appropriately timing changes in cash benefits in an unstable financial environment. This points to having a simple benefit structure during the transition period.

Gerd Schwartz

institutions, such as those in western societies, typically aimed at addressing normal life-cycle and other contingencies (old age, unemployment, and sickness). Reform-induced changes in real incomes can dominate those arising from normal contingencies. Consequently, permanent social security institutions—although they need to be developed over time—may not be a realistic solution to addressing the transitory effects of reform policies.

Impact of reform measures

Budgetary realities require that, inter alia, unsustainable public expenditures—for example, costly consumer subsidies and transfers to enterprises—be reduced. Besides helping establish a stable financial environment by reducing the budgetary deficit, reducing subsidies and transfers will allow increased public outlays on productive investments. There is a price to be paid, however. Reducing consumer subsidies implies an increase in consumer prices of major staples. Reducing transfers will inevitably force many enterprises—particularly inefficient ones—to cut back production and employment.

The implications of reform measures can be particularly severe in these economies because socialism and central planning had maintained grossly unrealistic relative prices. For example, in December 1991, just before the states instituted major price increases, the official price of a loaf of bread in Moscow was less than one half of one US cent at the free market exchange rate, compared with nearly one dollar in the United States. This unrealistically low price was maintained through budgetary subsidies and implicit taxes on farmers who received artificially low prices and, hence, few incentives for production.

The need to institute market-oriented social protection, stressing the role of private initiatives and responsibilities, clashes with the tradition of social protection (e.g., guaranteed employment and small wage differentiation), which features government intervention at the expense of economic efficiency, making the reform difficult.

Socialist legacy

All the states have inherited an elaborate system of social protection, which comprises food and nonfood consumer subsidies and cash benefits that include pensions, newly established unemployment compensation, sickness and maternity benefits, and family allowances that mitigate the cost of raising children. Expenditures on social protection are financed partly from the government budget (subsidies and some family allowances) and partly from payroll taxes, paid by employers (pensions, unemployment benefits, and maternity benefits). These benefits are channeled through the Pension Fund (family allowances and pensions), the Employment Fund (unemployment benefits and retraining allowances), and the Social Insurance Fund (sickness and maternity benefits).

Even excluding health and education expenditure, these benefits are extensive, often duplicative in their coverage, and, therefore, demand large budgetary resources. In addition, high payroll taxes have forced enterprises to raise prices, reduce wages, and curtail employment. For example, in Ukraine, these benefits accounted for about 30 percent of GDP in 1992, with almost one third financed through the government budget, of which more than half was subsidy expenditure. The combined payroll tax burden exceeded 50 percent of the wage bill.

Consumer subsidies. Consumer subsidies often have two components: budgetary, or explicit, subsidies that represent the difference between official producer and consumer prices and implicit subsidies, borne by producers—that represent the difference between market-determined and official producer prices.

These subsidies distort production and consumption patterns. For instance, low milk prices relative to meat prices in Kyrgyzstan at the end of 1992 prompted producers to slaughter cattle, with longer-term consequences for the supply of both milk and meat. A generalized subsidy for bread in Kyrgyzstan increased the consumption of bread during 1992 at the expense of other unsubsidized grain

products. In most instances, subsidized goods and services are available to all, irrespective of any criteria of need. Since high-income households often consume more of these subsidized products than low-income households do, subsidies provide more benefits in absolute terms to high-income than to low-income households.

Cash benefits. Unlike consumer subsidies, cash benefits in general are targeted to vulnerable groups—pensions to the old and disabled; unemployment benefits to the unemployed; and family allowances to the very young. However, their eligibility criteria are generous, and benefit levels high, considering available financing.

In Ukraine, one of every four persons is a pensioner, imposing a heavy burden on the working population for payroll contributions amounting to 10 percent of GDP to cover the cost of pensions in 1992. In contrast, around 40 percent of the population in Kyrgyzstan is 16 years old or younger, imposing a heavy burden on the budget for financing family allowances of 4 percent of GDP in 1992.

Special pensions and low retirement ages—55 years for women and 60 years for men—have increased pension expenditures. Many pensioners continue to work on their pre-retirement job while drawing full pensions, creating inequities among working and nonworking pensioners. In 1992, in Armenia, the Russian Federation, and Ukraine, such pensioners accounted for some 25 percent of all pensioners.

Relatively generous unemployment benefits—in some cases combined with allowances for each dependent and including those for both first-time labor market entrants or reentrants—are potentially expensive and may not encourage unemployed workers to search for jobs actively. Sick leave and maternity benefits are in excess of international norms. In addition, workers often can obtain virtually free vouchers to visit vacation resorts.

The structure of family allowances is complex and duplicative with different rates for different age groups and categories (e.g., children in military families and of single mothers). There were 17 such allowances in Ukraine in mid-1992. Family allowances have generally not been limited to families considered poor, thus increasing resource requirements.

Establishing safety nets

Clearly, the level and coverage of benefits is financially unsustainable over the foreseeable future in these economies, especially where revenues have contracted sharply. The heavy reliance on bank credit in some countries to finance expenditures has only worsened the plight of vulnerable groups by fueling inflation, while the existing payroll taxes remain a heavy burden on enterprises. Imbalances are further increased in some cases as payroll tax bases shrink with the reductions in real wages, while real social benefits—at levels close to minimum requirements—cannot be reduced.

In view of these prospects, reform will inevitably entail streamlining some of the existing benefits. Indeed, fundamental reform of the existing system has become an urgent task for ensuring the medium- to long-term sustainability of the system and, more immediately, adequate protection during enterprise restructuring and price liberalization to those who need it most. Foreign financing of social safety nets could be considered, but should be aimed at covering only the transitory component of social expenditure needs that arise from reform measures. Stronger reform would inevitably increase the need for such financing during the transition, but should eliminate it in the long run.

Target groups and targeting methods. To be financially sustainable, benefits should be commensurate with available resources. To this end, benefits should be limited to families with low per capita incomes. In practice, however, targeting benefits on the basis of household incomes or assets poses difficulties in identifying eligible households. This is particularly so when incomes of the majority of households are clustered together around the poverty line—the income level that is used to distinguish the poor from the nonpoor. In such a situation, many of the officially designated nonpoor may not be significantly better off than the poor. Even if a mechanism to monitor household incomes is devised, these benefits can create work disincentives.

Administratively easier alternatives are targeting benefits to specific geographical regions or socioeconomic groups. For example, food subsidies could either be targeted to urban areas (usually food-deficit regions) or to certain easily identifiable vulnerable categories of the population (for example, elderly, children, and the unemployed).

Assessing living standards. The states are diverse in living standards and demographic profiles, although for all of them life expectancy is fairly long (Table 1). In 1991, per capita GNP ranged between $1,100 and $3,800. Since 1991, however, outputs and incomes have been declining.

It is not easy to measure changes in living standards because, while formal sector activities have been declining, informal sector activities have been increasing. Snapshots as of June and December 1992 for two states indicate that the proportion of the minimum wage that is used in purchasing three basic consumption items—bread, milk, and meat—ranged between 30 and 50 percent (Table 2).

It should be noted that typical households may also receive informal sector incomes, in-

Assessing living standards

Social indicators in the states of the former USSR

	Per capita GNP (1991)	Demographics: Population (1990)	Demographics: Share of population (1990)		Infant mortality (1990)	Life expectancy at birth (1991)
	(thousand dollars)	(millions)	14 and under (percent)	65 and over (percent)	(per 1,000 live births)	(years)
Group I						
Armenia	2.2	3.4	30	7	20	72
Azerbaijan	1.7	7.1	33	6	25	71
Kazakhstan	2.5	16.7	32	6	25	69
Kyrgyzstan	1.5	4.4	36	6	31	69
Tajikistan	1.1	5.3	43	4	43	69
Turkmenistan	1.7	3.7	41	4	53	66
Uzbekistan	1.4	20.5	41	4	36	69
Group II						
Belarus	3.1	10.3	23	12	12	73
Estonia	3.8	1.6	22	12	14	71
Georgia	1.6	5.5	25	11	19	73
Latvia	3.4	2.7	21	13	11	71
Lithuania	2.7	3.7	23	11	10	73
Moldova	2.2	4.4	28	9	20	69
Russia	3.2	148.3	23	11	17	72
Ukraine	2.3	51.9	21	14	13	73

Sources: *Statistical Handbook: States of the Former USSR, 1992, Social Indicators of Development, 1991–92,* and *World Bank Atlas, 1992,* World Bank.

kind wages, as well as family allowances and subsidies on heating, housing, and transportation. For example, in Kyrgyzstan, the real average wages are estimated to have declined drastically in the past few years. Statistical surveys, however, do not suggest significant reductions in the consumption of basic foodstuffs even for low-income groups. This could mean that households have reduced nonfood expenditures drastically. It could also reflect increased informal activity, such as weekend work on the family plot by urban dwellers and moonlighting by formal sector workers. It is thus essential to conduct periodic household expenditure surveys.

Proportion of minimum wage used for basic goods

	Kyrgyzstan (as of December 1992)		Ukraine (as of June 1992)	
	Prices (rubles)	Consumption[1]	Prices (rubles)	Consumption[1]
Beef (1 kilogram)	97	1.3[2]	80.1	4.3[2]
Milk (1 liter)	18	18.0[3]	4.9	21.3[3]
Bread (1 kilogram)	14	3.0	2.3	4.6
Monthly minimum wage (rubles)		1600		900
Monthly cost of three items (rubles)		486		475

Source: Authors' estimates based on data provided by government officials.
[1] Latest available actual monthly consumption of low-income groups.
[2] Includes other meat products.
[3] Includes other dairy products.

Minimum consumption. In targeting benefits, the concept of a minimum consumption requirement (for example, in calories) can play an important role. In most states, the "minimum consumption basket" covers a wide range of goods and services, extending sometimes to silk blouses, with excessive per capita consumption norms used in determining the basket compared with actual consumption patterns of low-income groups. What is needed is a narrowly defined basket containing a minimum set of basic necessities and services.

Transfer instruments. Social benefits could be provided either in cash or in. kind. An intermediate instrument, such as coupons, could also be used. Cash is an efficient means because beneficiaries are free to use it in accordance with their specific needs. At the same time, cash payments require less administrative costs than in-kind transfers, say, distributing bread. Providing vulnerable households with cash, however, may be problematic. When food prices increase rapidly, the nominal amount of cash must be adjusted frequently. With the present difficulties in supply and transportation in a territory as vast as the Russian Federation and some other states, monitoring price developments in different regions is a difficult task. Providing cash may not achieve its objective unless the government ensures adequate supplies of the commodities. In-kind transfers of some items, such as milk and preventive health care through schools and health clinics, can be very effective.

Reform options

The exact mix of social safety nets for a country should depend on the type and sequencing of its economic reform policies, the socioeconomic and demographic composition of the poor, its administrative capacity, and financing availability. A number of general considerations must be taken into account in reforming subsidies and cash benefits.

Consumer subsidies. In the short run, two options are available with respect to subsidies. First, they could be eliminated altogether. This, however, will require at least partial compensation in the form of increased wages and cash benefits. Unless the financial policies are tight, higher wages can trigger a chain reaction of price increases and further wage increases. Second, subsidies may be retained for a few essential foodstuffs (e.g., bread) and selected services (e.g., heating) for a short period, and then gradually phased out. This latter approach has been followed by many states, but without much effort to improve targeting. The scope for financial savings, even in the short term, is immense if subsidies are targeted to the vulnerable groups with the objective of ensuring their minimum consumption.

Cash benefits. In the short term, the states need to restructure the eligibility, benefits, and duration of benefits along the following lines:

- For both the unemployed and pensioners, the average benefits should be modest. It may not be possible to set the average benefits far above the minimum benefits. Under the circumstances, and taking into account financial and administrative factors, a flat-rate (uniform) benefit structure may have to be adopted. This may appear inequitable, for it breaks the link to beneficiaries' past earnings. But in the short term, there may not be any other alternative.
- Pensions for working pensioners should be limited.
- To induce active job search, the duration of unemployment benefits should be short. Chronically unemployed should be retrained or supported through public works programs and other social assistance mechanisms. New entrants and re-entrants should also be assisted in a similar manner.
- Family allowances should be simplified by instituting a flat allowance for all categories of children. The amounts for the second and third child could be lower than that for the first.
- User charges should be levied for the use of resort facilities for vacations.

Over time, two additional measures should be implemented. First, the official retirement age for both men and women should be raised. Second, a part of sick leave should be shifted to enterprises and the duration of maternity benefits reduced.

Concluding remarks

While the sustained reform process will eventually lead to positive gains, it is optimistic to suppose that all of these gains will arrive early on in the transition. Hence, social safety nets should be integrated into the economic reform program to mitigate the adverse transitory effects of reform on the poor. The states already have a range of social policy instruments. However, these instruments need to be streamlined to accommodate budgetary and market realities. This demands political and administrative skills, as well as patience. ■

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The Experience with Floating Rates

PETER J. QUIRK AND HERNÁN CORTÉS-DOUGLAS

AFTER a decade of experimenting with floating exchange rates, developing countries are finding that the pros outweigh the cons if domestic economic policies are right. Already several new countries in the former USSR are opting to pick floating over fixed, and many more may follow their lead in the years ahead.

During the 1950s and 1960s, it was easy for developing countries to say they would peg their currencies to those of the major industrial nations, for by linking their currencies to the dollar, for example, they were effectively fixing the rate against the yen, deutsche mark, French franc, and British pound. The entire Bretton Woods system, of which the IMF was the guardian, was based on fixed rates. In fact, when Milton Friedman made his classic case for flexible rates in developed countries in 1950, he had few followers, even in academia.

But when industrial countries chose flexible rates in the early 1970s, the determination of the exchange rate arrangement and the choice of the currency peg became major policy issues for developing countries. This question took on more urgency in 1973 with the first oil price shock, and again in 1982 as the debt crisis began to unfold. The problem was that until recently, there has been a widespread belief that freely floating rates in developing countries would not work. The argument was that for countries to successfully operate market-determined exchange rates, they would need very sophisticated financial structures—such as forward and futures markets—that were often lacking in developing countries. There has also been a concern that floating the currency in the context of serious balance of payments difficulties could lead to a steep fall in its value, which in turn could adversely affect price stability and output in the short run.

These worries, however, are turning out to be ill-founded. Since the early 1980s, 33 developing countries and economies in transition have let their currencies float, the newest ones in Eastern Europe and the former USSR (see box). Recent IMF data on these countries—which includes all those with independently floating arrangements for the period 1985–91—confirm findings from a 1987 study (covering the early experience of only fifteen developing countries at that time) that these countries can satisfactorily operate floating systems. For the countries now gaining or regaining independence, this means a wider range of choices when it comes to picking an exchange rate regime.

Reasons for floating

The debate over the merits of floating versus fixed or "anchor" regimes is not a new one. The supporters of floating rates have long pointed to the inevitability of these regimes when, for example, international reserves are low or nonexistent, while supporters of fixed rates have long underlined the greater certainty that these rates offer for private decision making. Governments, however, have been increasingly motivated to adopt floating rather than other forms of exchange arrangements—such as pegs to single currencies or currency baskets, or managed floating whereby the exchange rate is moved administratively according to various economic indicators.

Insufficient reserves. This has been the most conspicuous reason, for without sufficient reserves, a commitment to defend a fixed or crawling peg exchange rate has not been credible and has been quickly tested by the foreign exchange markets. Foreign exchange

For information on the 1987 study, see "Floating Exchange Rates in Developing Countries," by Peter J. Quirk, Benedicte Vibe Christensen, Kyung-Mo Huh, and Toshihiko Sasaki, Occasional Paper No. 53.

transactions now top $1 trillion a day worldwide, and information on even the remotest speculative or arbitrage possibility flows almost instantaneously by satellite or wire, meaning that governments need large resources to hold a rate against market sentiment. At the time the float was initiated in the countries studied, most had experienced a decline in their gross official international reserves to less than three months' worth of imports (this was also the case in Russia, Latvia, Lithuania, and Ukraine in 1992). The exceptions were Brazil, Ghana, Nigeria, and Paraguay, but the usability of their reserves was limited, in large part because of sizeable external payments arrears.

Information requirements. It is difficult for any country to try to determine a sustainable equilibrium exchange rate under fixed or crawling regimes, and the task becomes even more complicated if the country is undertaking extensive macroeconomic and structural reforms (e.g., privatization, reducing the size of the state, and trade and foreign exchange liberalization). If the rate is set at a level far from equilibrium, the resulting effects may lead the authorities to reset the rate to rectify such errors, which in turn could undermine confidence and the clarity of signals of the direction of government policies in the early stages of reform.

Macroeconomic instability. This has been evident in most of the countries opting for floating (e.g., Brazil, Peru, Romania, Russia, and Zaire), in the form of continuing high rates of inflation in the early stages of reforms or the absence of sufficiently strong programs. In these circumstances, fixed or crawling exchange rates could not be adjusted quickly enough to keep up with price realignments and neutralize significant arbitrage possibilities against the parallel market exchange rate. The authorities thus had little choice but to allow direct market determination of the exchange rate if they were to avoid a shift of foreign exchange transactions to the parallel market, with its adverse consequences in tax evasion, criminalization, and loss of economic control. Indeed, a desire to stop importing inflation from Russia led Latvia and Lithuania to float their new currencies in the second half of 1992 (see "The Ruble Area: A Breaking of Old Ties?" in this issue).

Estonia, on the other hand, with ample international reserves, opted to peg to the deutsche mark in the context of a currency board. A full currency board arrangement is one type of fixed rate regime that can enhance the credibility of macroeconomic policies (the board assures convertibility by insisting on the necessary foreign exchange backing before new currency is issued). But even then the board must be supported by consistently strong fiscal and monetary policies, and the penalty for policy slippage in terms of credibility is high.

Political considerations. Finally, the choice of an exchange rate regime cannot be divorced from these considerations. In most instances, the sampled countries were in such dire economic straits that the authorities saw considerable merit in letting the market be responsible for the adjustment of the exchange rate—this automatically reduces the influence of lobbies and vested interests. In addition, for the previously centrally planned economies, the shift to market-determined exchange arrangements was an important manifestation of a fundamental change of economic policy.

Developing countries and economies in transition now operating floating exchange rate systems include: Afghanistan, Albania, Bolivia, Brazil, Bulgaria, Costa Rica, Dominican Republic, El Salvador, The Gambia, Ghana, Guatemala, Guyana, Haiti, Honduras, Jamaica, Latvia, Lebanon, Lithuania, Mozambique, Nigeria, Paraguay, Peru, the Philippines, Romania, Russia, Sierra Leone, South Africa, Sudan, Uganda, Ukraine, Venezuela, Zaire, and Zambia.

Setting up the market

Once a country decides to float its currency, the authorities must grapple with the extent to which the market should be centralized. Essentially two options are available: an auction market, in which the central bank plays a key role by deciding the amount of foreign exchange to be auctioned, or a private sector ("interbank") market, in which commercial banks and sometimes foreign exchange dealers handle all of the transactions.

In the early 1980s, a number of countries experimented with the auction approach, but as the IMF's 1987 study showed, the results—destabilizing intervention, ad hoc controls, and discontinuities in the supply of foreign exchange to the market—left much to be desired. Since the mid-1980s, auctions have been introduced as supplements to extensive commercial bank markets, or as limited secondary dual markets, with mixed results. In Nigeria, where an auction market was used to distribute the foreign exchange proceeds of oil exports to banks and from there to the foreign exchange market, there have been large spreads between the auction and market exchange rates, leading to sustained excess profits for participating banks. In Russia, however, where the auction was introduced as a complement to the market in April 1991 for export proceeds of enterprises (although nonbank residents also participate in the auctions), the process has been relatively smooth. So far, the main lesson appears to be that auctions require a significant commitment on the part of the authorities to ensure transparency and competitiveness, although the very choice of this centralized approach may send a signal that the commitment is lacking.

For countries that choose the interbank market, a key question is whether nonbanks (such as bureaus of exchange and hotels) should be included. Most of the larger developing countries have had a sufficient number of banks to make cornering of the market by a bank or group of banks unlikely. Even so, most have licensed nonbank dealers to work alongside the banks. One possible drawback of including nonbanks is that, given the continued use of capital controls, it is easier to monitor banks, which must meet extensive reporting requirements. However, widespread capital flight in the 1980s, despite extensive capital controls, raises questions regarding the effectiveness of any monitoring mechanisms. Nonetheless, many countries have concluded that the inclusion of licensed nonbank dealers is well worth the monitoring costs, because it leads to a better customer service network and provides insurance against market rigging.

The role of the IMF

Where does the IMF fit into this picture? Under the IMF's Articles of Agreement, countries are free to adopt the exchange arrangement of their choice; the regime chosen, of course, should be consistent with the country's obligations to the institution. The IMF advises on the implications of various types of arrangements—in particular, whether the mechanism chosen helps the adjustment process and leads to balance of payments viability, and whether it is consistent with the IMF's rules and practices, including those associated with the use of IMF resources.

The IMF also provides technical assistance on adapting the foreign exchange market to the particular circumstances of the member. This includes broad policy and technical aspects of market design; the formulation of foreign exchange laws and regulations; the integration of these laws and regulations with trade, capital, and monetary policies and controls; establishing central bank foreign exchange operations; developing regional payments systems; introducing new national currencies; and developing forward foreign exchange markets.

The pursuit of flexible exchange rate poli-

Domestic policies make a difference

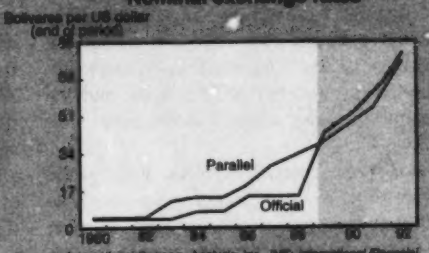
Venezuela is a typical case of a country that adopted floating exchange rates and followed moderate monetary and fiscal policies under an IMF- supported adjustment program. Instead of a free fall, the exchange rate depreciated moderately after floating (following the trend of parallel market rates), and strong capital inflows permitted the parallel rate to depreciate less than the official floating exchange rate. Moreover, the inflation and growth pictures improved.

In contrast, Russia is one of the countries that adopted floating in the midst of macroeconomic disequilibrium, but where, after a few months of declining inflation (through July 1992), expansive domestic policies fueled an acceleration of inflation and further depreciation of the currency.

The shaded area represents the period after exchange rates floated.

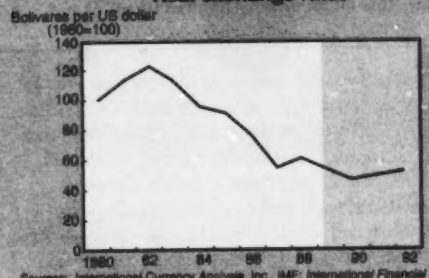
Venezuela

Nominal exchange rates



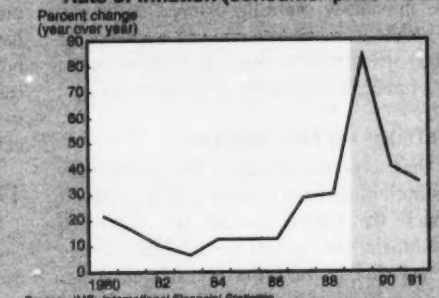
Sources: International Currency Analysis, Inc., IMF: *International Financial Statistics* and IMF staff estimates.

Real exchange rates



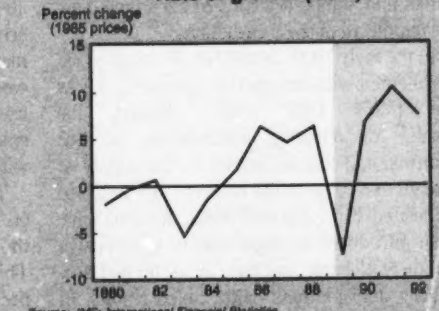
Sources: International Currency Analysis, Inc., IMF: *International Financial Statistics* and IMF staff estimates.
Note: Rates are real effective exchange rates.

Rate of inflation (consumer price index)



Source: IMF: *International Financial Statistics*.

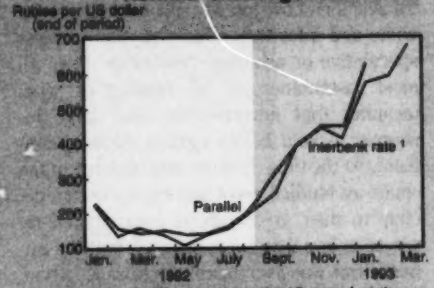
Rate of growth (GDP)



Source: IMF: *International Financial Statistics*.

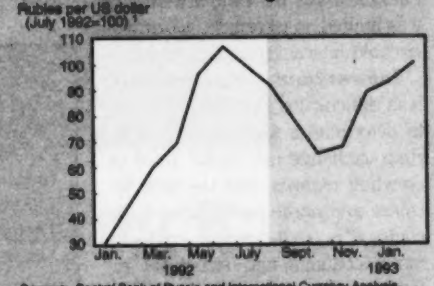
Russia

Nominal exchange rates



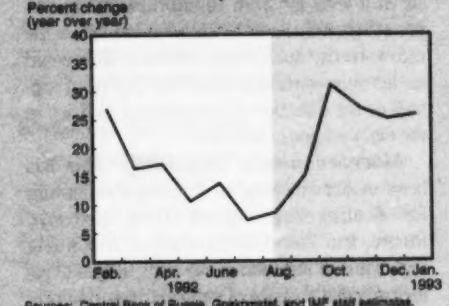
Sources: Central Bank of Russia and International Currency Analysis.
1 Moscow Interbank Foreign Currency Exchange.

Real exchange rates



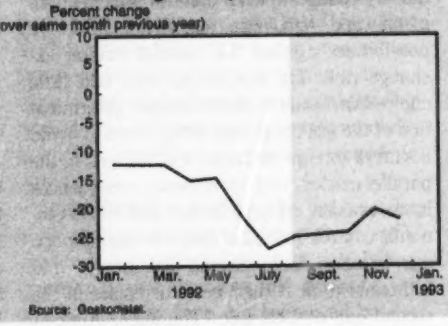
Sources: Central Bank of Russia and International Currency Analysis.
1 Real exchange rate against the US dollar; deflators used are consumer price indices.

Rate of inflation (consumer price index)



Sources: Central Bank of Russia, Goskomstat, and IMF staff estimates.
1 Urban CPI through January 1993.

Rate of growth (industrial production)



Source: Goskomstat.

cies is an important—and often a conditional—ingredient in the design of members' financial programs supported by the use of IMF resources. In many cases, these programs have featured the adoption of floating exchange regimes as a mechanism to address problems of severe disequilibrium in exchange markets. In the 1987 review, for example, it was noted that one quarter of all programs in the period 1983–86 envisaged adoption or maintenance of such arrangements. This close association has continued: of 51 arrangements for the use of IMF resources outstanding as of December 31, 1992, 18 were with countries maintaining floating rates. Further, of the 24 floating arrangements adopted in 1985–92, 15 took place either as a performance criterion or associated action in the context of an IMF program. In part, these figures are a reflection of the realities of today's economies—a trend toward more flexible arrangements—as many

countries not using IMF resources are also floating.

How countries have fared

With more than a decade of experience behind us, we can at last examine carefully how developing countries have performed following the adoption of floating rates. Interestingly enough, evidence gathered at the IMF strengthens the early indications (see charts).

Do parallel market rates closely follow the money supply? Even prior to floating, this is one of the first questions that needs to be answered, as in the end, it is the rate itself and not the regime that is important. Large differences between official and market-determined (parallel) exchange rates signal that the official rate is not viewed as realistic by the market. It is, therefore, useful to consider evidence that such market-determined rates are important in some more fundamental sense than market sentiment.

To do this, the IMF looked at the relationship between parallel market rates and broad money (lagged one period) for a sample of 13 major developing countries over the period 1977–89. The result was a remarkably strong direct correlation between the two variables. This suggests that while official rates have been held by governments at often inappropriate levels, exchange markets took account of the strengths and weaknesses of monetary policy.

Will currencies go into a free fall? This second question is based on the fear that once let loose, the exchange rate would tumble—which would be tough politically—thereby aggravating the inflationary forces. But a striking feature of the experience with exchange rate movements after floating is that they have been broadly similar to those of parallel market rates before floating. The fixed or managed regimes in place before floating did not eliminate, or even greatly smooth official exchange rate movements, and these movements broadly followed those of the parallel rates, but with a considerable lag.

In several countries, the official exchange rate remained less depreciated than the parallel rate after floating, reflecting a premium associated with continuing exchange controls (Guatemala, Guyana, the Philippines, Peru, and South Africa,), or market imperfections (Nigeria, as discussed above). In some others, the parallel rate was less depreciated than the official exchange rate after floating (Brazil, Venezuela, and Zaïre), indicating either the influence of strong capital inflows into the entire system (Venezuela) or growing avoidance of the official arrangements. In countries where large reflows occurred following floating and liberalization (e.g., El Salvador, Nigeria, and Venezuela), the reversal was generally anticipated but the speed of the turnaround and the size of the inflows were nevertheless surprising. Such a reversal has also taken place recently in Jamaica, which liberalized remaining exchange controls and interest rates in 1991 after floating its currency in 1983.

In many countries, the initiation of floating arrangements continued a process of real effective depreciation and improving competitiveness that was already underway (Guyana, Nigeria, the Philippines, South Africa, Uruguay, Venezuela, and Zaïre). The exceptions were Brazil and Peru, where inflation was particularly rapid; El Salvador and Guatemala, where a small appreciation in the one or two years following floating reflected a strengthening of economic policies; and Paraguay, owing to large depreciations in neighboring countries. In Bolivia, the shift to floating reversed a deterioration in competitiveness beforehand.

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What will happen to major economic indicators? The short answer to this third question is that economies generally performed better after switching to floating. These macroeconomic improvements that followed the shift to floating arose in the context of the adoption of comprehensive stabilization programs. Of the twelve countries surveyed for the period 1985–92, inflation declined in six countries following floating (Bolivia, Brazil, The Gambia, Peru, the Philippines, and Venezuela) and accelerated in one (Nigeria). In the other cases, inflation was broadly unchanged, as it was in Paraguay following an initial upturn. As for output, the story is surprisingly positive. For eleven countries surveyed for the period 1985–92, six countries experienced faster GDP growth after floating—Bolivia (with a one-year lag), Nigeria, Peru, the Philippines, Uruguay, and Venezuela (after a one-year lag)—and in two (Brazil and Paraguay), growth deteriorated.

Implications of findings

After a decade of experimenting with flexible rates, the evidence is building that developing countries with diverse economic structures can satisfactorily operate floating rate systems, even if they have relatively simple financial systems. The key is to support the floating arrangements with conservative monetary and fiscal policies to ensure macroeconomic stability—a rule that holds for all countries regardless of their exchange regime.

Although resort to floating has often been in response to an exchange crisis, the experience shows that a priori arguments against floating are not valid. Floating rates do not necessarily lead to a free fall of the currency, nor do they imply higher inflation or lower output. Rather, the experience of countries adopting floating indicates that if the right monetary and fiscal policies are in place, the economic indicators can be expected to improve. The importance of monetary policy is highlighted by the fact that parallel market exchange rates before and after floating closely follow the money supply.

What does this imply for countries now introducing new currencies and in the process of structural economic transformation? Certainly, the success of independent exchange rate floating has already convinced many of them to adopt floating rates. This is the case for Russia and all but one (Estonia) of the newly independent states of the former USSR that have completely abandoned the ruble area (i.e., declared the ruble nonlegal tender)—namely, Latvia, Lithuania, and Ukraine.

It is too early to assess the impact of these floating arrangements in the states of the former USSR, but in Russia, inflation has been more rapid than depreciation of the ruble because of the government's loose monetary and fiscal policies. Latvian rubles and Lithuanian talonas have significantly appreciated against the ruble since floating began, while Ukrainian karbovanets have depreciated dramatically against the ruble, reflecting highly expansionary domestic policies. As for the other states that may still opt to leave the ruble area and introduce their own currency, their low levels of reserves should be a strong argument to lead them to adopt flexible exchange arrangements. ■

The Theory of Optimum Currency Areas Revisited

GEORGE S. TAVLAS

THE THEORY of optimum currency areas is back. Once dismissed as a "dead-end problem" with little practical significance to exchange rate policy and monetary reform, the issue has been resuscitated and rethought—indeed, is now heralded as one of the centerpieces of international monetary economics.

The international monetary system is characterized by a wide diversity of exchange rate arrangements. For example, in the aftermath of the breakup of the states of the former USSR, a key issue has been whether these countries should maintain the Russian ruble as their currency. Should they issue their own currency and allow it to float freely against other currencies, or should they adopt an exchange rate arrangement somewhere between these two alternatives (such as the limited flexibility of the currencies participating in the exchange rate mechanism of the European Monetary System)? This issue has revived the theory of optimum currency areas, once dismissed as primarily a scholastic discussion, because it offers guidance to countries choosing an exchange rate arrangement and sets forth the costs and benefits associated with various arrangements. In *One Market, One Money* (1991), which evaluated the desirability of all countries of the European Community (EC) moving to a single currency, the EC used the optimum currency area approach as its standard of reference.

As the theory of optimum currency areas has taken on increased relevance, it has also been modified to take into account the lessons of recent economic history as well as recent contributions in the professional literature. This article will discuss what some of these changes are, and how the "new" theory might apply to countries faced with the decision as to whether or not to form a currency union.

Why the surge of interest?

By enumerating a set of criteria to guide countries in their choice of exchange arrangements and by stipulating the benefits and costs associated with different kinds of arrangements, this approach attempts to identify the optimal geographic area within which countries should adopt a monetary union. A monetary union is typically defined as the adoption among the participating countries of either a single currency or separate currencies with the following exchange rate arrangements: (1) the irrevocable fixing of parity rates; (2) the elimination of margins of fluctuation between or among exchange rates; (3) the total and irreversible convertibility of currencies (i.e., absence of exchange controls); and (4) the complete liberalization of both current and capital transactions. The optimum size for a currency area is defined in terms of attaining the macroeconomic goals of internal balance (low inflation and low unemployment) and external balance (a sustainable balance of payments position). That is, for a given country, the approach addresses the issue of what kind of exchange rate arrangement would be more likely to achieve low levels of inflation and unemployment, as well as external balance.

What accounts for the revival of interest in this subject? Two broad sets of factors have been primarily responsible for this outcome. The first set reflects developments on the international monetary scene, including:

- the reinvigoration during the late 1980s and early 1990s of the movement toward European monetary integration with the aim of creating a single European currency by the end of the present decade;
- the emergence of intense pressures within the exchange rate mechanism (ERM) of the European Monetary System in late 1992 and in early 1993, including the suspension of several currencies from the system and the first ERM realignments since January 1987, reigniting the debate over which countries should initially be included in the system if Europe is to proceed with monetary unification;
- the breakup of the USSR and the issue of the demarcation of the optimum currency domain among the states of the former USSR; and
- the emergence of a tripolar international monetary system, centered on the US dollar, the deutsche mark, and (to a lesser extent) the Japanese yen, and the implications of such a system for world welfare and the conduct of macroeconomic policies among the currency blocs.

The second set of factors contributing to the surge of interest in the optimum currency area issue involves developments in macroeconomic theory. These developments have allowed the results of the original optimum currency area approach to be cast in a new light. There is much from the old approach that has withstood the test of time—for example, the

criteria set forth as guides in choosing a single currency are still relevant and illuminating. But the earlier results on the costs of joining a currency area—such as a nation's inability to choose the long-run trade-off between inflation and unemployment—have been seriously challenged in view of recent developments in macroeconomic theory.

Mid-1970s theory

The early literature on optimum currency areas was concerned primarily with two issues. First, it sought to delineate the structural characteristics of a national economy that would render exchange rate changes vis-à-vis the currencies of other countries either ineffective, or unnecessary. Second, it studied the costs and benefits to a nation participating in a currency area.

With regard to the former issue, several criteria are relevant for choosing the likely members of a currency union.

The degree of labor mobility. Labor mobility between countries reduces the necessity of exchange rate variation as a means of restoring external competitiveness and eliminating external imbalances, since the mobility of labor from high- to low-unemployment regions will tend to bring about a convergence of wages and other costs (factor-price equality) among the countries. Because the degree of labor mobility is likely to be related to geographic distance, this criterion is often used in support of currency unions among neighboring states.

The degree of financial market integration. A high degree of financial market integration lessens the need for changes in relative costs and prices among countries via exchange rate adjustment, since capital movements can finance inter-regional external imbalances. Such balance of payments financing helps cushion the adjustment process and facilitates a spreading out of the adjustment process over a longer period of time.

The openness and size of the economy. The more open the economy, the more domestic prices are likely to change in line with exchange rate variations, inducing possible changes in labor and other costs. Consequently, fixed exchange rate arrangements are preferable for open economies since nominal exchange rate changes in such economies are less likely to be accompanied by significant effects on real competitiveness. As a corollary, the smaller the size of the economy, the more open it is likely to be and, thus, the more inclined to join in a currency union.

The degree of commodity diversification. Highly diversified economies are viewed as better candidates for currency unions than are less diversified economies, as diversification provides some insulation from a variety of shocks, forestalling the need for frequent changes in relative prices via the exchange rate.

Price and wage flexibility. When prices and wages are flexible between regions, adjustment of imbalances among countries is less likely to be associated with unemployment in one region and inflation in another, diminishing the need for exchange rate adjustment.

The degree of goods market integration. Countries that possess similar production structures are prone to similar terms-of-trade shocks, negating the effectiveness of exchange rate adjustment between the countries as an instrument to deal with such shocks. Consequently, countries with similar production structures are deemed to be better candidates for currency unions than are countries whose production structures are markedly different.

Fiscal integration. The higher the level of fiscal integration between two areas, the greater their ability to smooth out diverse shocks through fiscal transfers from a low-unemployment region to a high-unemployment region. In turn, fiscal harmonization usually implies that the members of a monetary union also enter some form of political union.

Benefits and costs

In addition to delineating the characteristics that make membership in a currency union desirable, the early literature endeavored to enumerate the costs and benefits of a nation's joining a currency area. Early writers noted, for example, that a benefit of adopting a single currency is that it eliminates exchange rate risk. This risk is equivalent to a transaction cost to a risk-averse trader, who will sometimes bear an explicit cost (such as buying a hedging instrument) to avoid it. Also, a single currency enhances the role of money as a unit of account and decreases other transactions costs, including the costs of information, search, and calculation.

Further, the adoption of a single currency would eliminate the need for firms to maintain staff to look after currency exchanges within the area. Other decreases in costs to be derived from the move to a single currency include those associated with: (1) economizing on exchange reserves through the pooling of reserves; (2) elimination of speculative capital flows within the area; and (3) enlargement of the foreign exchange market vis-à-vis other countries, decreasing both the volatility of prices and the ability of speculators to influence prices and, thus, to disrupt the conduct of monetary policy.

The main cost (in addition to the loss of the exchange rate tool) traditionally ascribed to joining a monetary union is the loss of monetary policy independence. That is, when a nation joins a monetary union, the formulation of monetary policy is no longer made at the national level but at the level of the monetary union. If a country happens to have a high unemployment rate relative to the other members of the union, it no longer has the option of easing monetary policy to lower its unemployment rate unless the other members agree to ease monetary policy throughout the union. If, as many early writers on this subject believed, there is a long-run trade-off between unemployment and inflation (the so-called Phillips curve), a nation pays a high price in joining a currency union in that it cannot use monetary policy as a means of achieving its desired mix between inflation and unemployment.

The "new" theory

In recent years, the theory of optimum currency areas has been modified in line with developments in other areas of macroeconomic theory. Two developments are particularly relevant to the discussion. The first concerns the formation of inflation expectations, which has implications for whether a long-run (or even a short-run) trade-off actually exists between inflation and unemployment. If such a trade-off does not exist, then it is preferable for nations to aim for a low rate of inflation. The second development—which is the time-inconsistency issue—provides guidance as to how monetary authorities can best make credible their commitment to reducing inflation. These developments seek to clarify the benefits and costs of currency area participation so that a country can "get it right" in deciding whether to join a currency area. For one drawback from "getting it wrong" is the high cost of dissolving the currency linkages later on.

The vertical Phillips curve and policy ineffectiveness. The early view of a permanent (i.e., long-run) trade-off between inflation and unemployment was undermined by the experience of the late 1970s and early 1980s, which saw the coexistence of rising unemployment and higher inflation in a number of countries. The implication of the view that the unemployment rate cannot be lowered by raising the rate of inflation is that the only benefit of floating exchange rates and independent monetary policies is the ability to choose a different rate of inflation from other countries with no effect on employment. If money supply changes do not have real long-run effects on the economy, then monetary policy is considered to be "neutral." This is the key issue now in the EC. Both Italy and the United Kingdom left the ERM because they wanted to have an independent monetary policy for short-run cyclical reasons.

The nominal anchor issue. A monetary union between two countries, achieved for example through the fixing of exchange rates, imposes identical interest rates (except for a risk premium) in the two countries. There are, however, many levels of nominal interest rates—and, thus, levels of the money supply—that can fulfill the fixed exchange rate commitment. Accordingly, the countries must agree on how monetary policy should be conducted. In other words, there must be some institutional mechanism that determines the money stock in the system—that is, the need to provide a nominal anchor to the system. This issue has implications for the ability of countries that are members of a currency union to conduct anti-recessionary monetary policy, for example in the face of adverse terms-of-trade shocks.

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Two kinds of arrangements can be used to pin down the money stock in a monetary union: symmetric systems in which the members cooperate in reaching a policy solution, and asymmetric systems in which one country takes a leadership role. While each of these arrangements can serve to determine the money supply in a monetary union, each has its own particular kinds of problems. Symmetric (i.e., cooperative) monetary unions entail the loss of the "safety-valve" provided by resort to either suspension of currency convertibility or restrictions on trade and capital flows. In instances in which the members of a cooperative monetary union are hit by different shocks, competitive pressures will build for the discontinuation of cooperation and the adoption of independent, national monetary policies. Indeed, a number of commentators have suggested that it was precisely such pressures, emanating from different shocks, that led to the suspension of the pound sterling and the Italian lira from the ERM.

Asymmetric unions can exacerbate the domestic business cycle in peripheral (i.e., the nonleading) countries. For example, assume that only a peripheral country is hit by a negative terms-of-trade shock and a corresponding contraction in real income. Its money supply should be allowed to expand. But participation in the union prohibits the monetary authorities from taking expansionary action. In addition, the contraction of real income results in a decline in the demand for money, causing interest rates to fall and leading to capital outflows. Since the center country does not change its monetary policy, it sterilizes the capital inflow, keeping its interest rates unchanged. Hence, the capital outflow in the peripheral country effects a contraction of its money supply. The country not only loses its ability to conduct an independent monetary policy but also experiences money supply effects that exacerbate the business cycle. Thus, an important precondition for following a common monetary policy depends critically on the nature and the mix of shocks to which the participant countries are likely to be exposed.

The time-inconsistency issue. A protracted record of relatively low inflation (and low inflation variability) depends upon credible and stable government policies, particularly monetary policy. A country whose authorities have a reputation for pursuing inflationary policies will find it difficult to shed that reputation without a long and costly process of disinflation. To gain credibility, authorities must pursue a policy rule that is time consistent. The time consistency literature argues that the public recognizes that policymakers have every reason to assert that they will aim for low inflation, but it also recognizes that policymakers have a strong incentive subsequently to renege on these commitments once the public accepts the assertion at face value.

The reason why policymakers may have reason to renege is that if it can generate an unexpectedly higher inflation rate, it can generate a lower unemployment rate in the short run (but not permanently) and it can write off some of its debt. According to this view, the public will not believe that low inflation will be maintained unless policymakers can provide evidence that they are following a nonreversible policy rule that will yield low inflation. That is, if a particular policy rule is expected to become suboptimal in a future period, economic agents will assume that the authorities will change the rule, even if they have announced that they will not change the rule. As a result, the rule is not time consistent and lacks credibility.

One way to gain credibility is by "tying the hands" of the government by some kind of institutional change. The most drastic change would be to abolish national monetary sovereignty by joining a union with a low in-

flation country. By so doing, it may be possible for the high inflation country to reap the benefits of a low inflation reputation, without any loss of output and employment. If indeed there is no permanent Phillips curve trade-off, the high inflation country has little, if anything, to lose and much to gain in the long run by joining a currency union with a low inflation country. While, in principle, other domestic commitment mechanisms to contain inflation can be devised (e.g., the announcement of monetary growth targets), many countries have not been able to create domestic monetary institutions with a credible commitment to price stability. These arguments, however, do not mean that, for a small- or medium-sized country, joining a monetary union with a low inflation country is necessarily the road to follow. As discussed earlier, it is also important that the small- or medium-sized countries possess similar characteristics to the anchor currency country. If they do, it might make sense to join a currency union. But if the structural characteristics are different, then joining a monetary union may not prove to be a lasting exchange rate arrangement.

To summarize . . .

The "new" theory of optimum currency areas uses the earlier approach as a point of departure, stressing the criteria relevant for choosing a single currency domain and enumerating the costs and benefits of a single currency. As did the earlier theory, the new theory stresses that if a country is highly integrated with a geographic area in factor mobility, financial transactions, and commodity trading, and if the country is small, open, and has a diversified production structure, then fixed exchange rates (or a single currency) for that area may reconcile internal and external balance more efficiently than flexible exchange rates. The adoption of a single currency would have the added benefit of setting economies of scale into play, such as the decline in transactions costs involved in having a single currency rather than several currencies.

In sum, it is unlikely that any one exchange rate regime will be appropriate for all countries. The theory of optimum currency areas identifies characteristics that can be used to help in the choice of an exchange rate arrangement. The approach indicates, for example, that the smaller European countries that are members of the European Monetary System have relatively strong incentives to adopt some form of fixity in their exchange rate arrangements, or even to join a monetary union, given that such countries are relatively small and open, possess relatively high factor mobility with each other, and, in many cases, share similar production structures. It is important to note, however, that the criteria underlying the optimum currency area approach do not always point in the same direction. In such instances, the approach does not suggest which criteria should be assigned the highest priority. Finally, it should be remembered, the success of any monetary union is also likely to depend to a significant degree upon the political commitment behind it. ■

Suggestions for further reading

Contributions to the recent literature can be found in *Financial and Monetary Integration*, edited by Anthony Courakis and George S. Tavlas (Cambridge University Press, 1993). Evaluations of the recent literature include work by Paul de Grauwe, *The Economics of Monetary Integration* (Oxford University Press, 1992), Paul Masson and Mark Taylor, "Issues in the Operations of Monetary Unions and Common Currency Areas" (in *Policy Issues in Evolving International Monetary Systems*, IMF Occasional Paper No. 96, 1992), and George S. Tavlas, "The 'New' Theory of Optimum Currency Areas."

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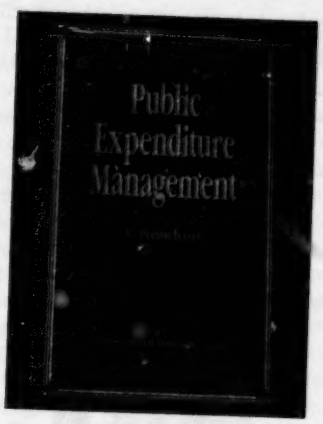

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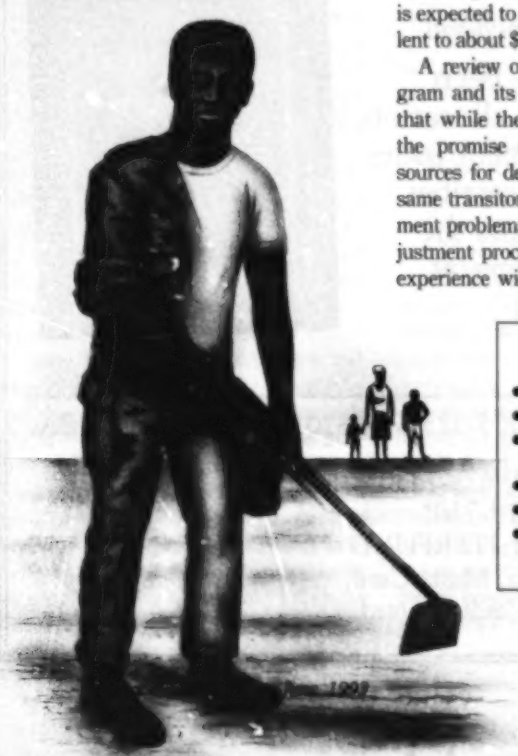
War to Peace Transition in Uganda

NAT J. COLLETTA AND NICOLE BALL

IN MANY developing countries, an overblown military sector absorbs substantial budgetary resources that could be better used for development. Large armies also pose a potential threat to democratic civilian governments, by emphasizing conflict over compromise. In the countries of sub-Saharan Africa, the military sector has imposed an especially heavy burden.



The end of the Cold War has brought an end to many of the armed conflicts (Ethiopia, Mozambique, and Namibia) that disrupted the African continent during the past decade. It has also fostered political liberalization (Benin, the Gambia, Mali, Namibia, and Zambia). Together with the economic transformation that is taking place in many African countries, these political adjustments offer the opportunity for governments to reallocate scarce resources from national security to social and economic development.

One country—Uganda—has already begun a reallocation process, reducing the share of defense expenditures in total public expenditures to a budgeted 16.7 percent in fiscal year 1993 from 31.2 percent in fiscal 1990. The country plans to achieve this reallocation by demobilizing 50,000 soldiers over a three-year period beginning in 1993. During fiscal 1993 alone, Uganda's transition from war to peace is expected to reap a "peace dividend" equivalent to about $14 million.

A review of Uganda's demobilization program and its progress to date demonstrates that while the war to peace transition holds the promise of recapturing substantial resources for development, it also presents the same transitory social and economic development problems of any transformation and adjustment process. As a case study, Uganda's experience with demobilization offers unique guidance for other governments that will be seeking to set their countries on the path to economic and political modernization.

Table 1

A typical NRA veteran

- male, 20–30 years old
- married, with 2.17 dependents
- primary school education, semi-literate, unskilled
- few personal possessions; no housing
- intends to earn living as peasant farmer
- 30 percent chance of serious medical disability, including HIV infection

Background

Uganda's National Resistance Movement (NRM), which came to power in 1986, inherited a country whose economy and society had been devastated by fifteen years of civil strife. But since 1986, the NRM and its military arm, the National Resistance Army (NRA), have been moving the country toward social and economic reconstruction and development. In 1987, the government launched a program of stabilization, economic recovery, and structural adjustment that resulted in a marked improvement in economic performance, including real GDP growth of about 5 percent annually and a reduction in inflation to less than 15 percent. These economic adjustments, coupled with ongoing reforms in public sector finance and management, have resulted in the need to cushion the impact of civil service reform on large numbers of retrenched civil servants, which is being accomplished through the provision of a transitory safety net.

On a parallel track, demobilization of the NRA is releasing large numbers of potentially vulnerable persons and their families into a relatively hostile labor market. Many of these soldiers have no home beyond the NRA, little experience of civilian life, no savings, and few marketable skills (Table 1). If they are simply discharged from the military, experience from other parts of Africa—and within Uganda itself—suggests that they could resort to banditry and other forms of unlawful behavior to provide for themselves and their families, further burdening a very weak economy and undermining the country's hard-won stability. Recognizing that demobilized soldiers would constitute a "specially disadvantaged group," the government decided to establish a Veterans

Assistance Program (VAP) to facilitate their integration into the civilian economy.

Veterans Assistance Program

Uganda's demobilization program aims to provide a transitory safety net linked to a longer-term program of reintegration into a productive civilian life.

Program planning and underlying assumptions. The first step in creating the VAP was to undertake a needs assessment. Three feasibility studies were carried out by local consultants, covering:

- a profile of the personal characteristics and post-demobilization aspirations of military personnel;
- the structure and cost of near- and longer-term reintegration programs; and
- the structure and cost of administrative arrangements.

A primary objective of the demobilization program was to create a peace dividend that could be applied to priority economic sectors, so new soldiers will not be recruited to replace those released from the NRA. Demobilization will represent a permanent net reduction-in-force, and veterans will not be eligible for employment in either commercial activities run by the military or the civil service.

The program covers the veteran and his immediate family (a "vulnerable social unit"), not just individual soldiers, thus increasing the number of potential beneficiaries to over 70,000. It anticipates that this approach will also smooth the transition to civilian life and community reintegration.

Benefits are being provided to veterans in their home districts, thereby spreading the social costs of reintegration among as many communities as possible. This is intended to encourage veterans to find employment in these areas, rather than congregating in Kampala or other urban centers, and to reduce the risk of large groups of former soldiers disrupting law and order.

Other features of the program are:

- it will be administered by civilians;
- it will include a monitoring and beneficiary assessment program to ensure that benefits are used as intended;
- community services will be enhanced in the home communities to accommodate the additional needs and to provide an incentive to these communities; and
- veterans and their families will receive a mixture of cash and in-kind benefits to keep the administrative and logistical burden to a minimum.

Program structure, objectives, and design. Following the recommendation of the third feasibility study, the government decided to implement the VAP in three stages: assembly and discharge; demobilization; and reintegration. The first phase, handled by the army, occurs over a minimum period of two to three days in central assembly points in various regions of the country. The second phase of demobilization provides the transport and settling-in benefits. The latter are spread over time (six months) and location (discharge point and home district) to ensure that they will be available when actually required and used as intended, as well as to encourage veterans to settle in rural areas. The final phase, reintegration, incorporates the longer-term social adjustment, training, and employment programs.

Settling-in package

Cash payments	$480	Clothing, food, and medical allowances; transition per diem; agricultural and building allowances.
In-kind payments	$138	Roofing materials; school fees; transportation to home district; community social services.
Total value	$718	Distributed over six months.

Preparing for demobilization. Although Uganda had hoped to demobilize some 30,000 soldiers by October 1992, the government soon recognized that it would be unwise to discharge soldiers before the VAP was in place to support their transition to civilian life. It therefore decided that Phase I of the demobilization would not begin until the VAP administrative structure was ready to function.

On October 20, 1992, the legislation creating the VAP was approved by the National Resistance Council. By mid-November, the first group of soldiers to be demobilized had been identified by name, rank, and home district, and the preparation of a computerized personnel management system and discharge documentation began. Plans were also in place to move the soldiers from their units to assembly points, and assembly points had been provided with requisite shelter, water supply, and sanitation facilities. By mid-December, the remainder of the administrative structure had been readied (see box), and a detailed plan for administering and monitoring entitlements to veterans at the district level had been devised.

The financial management and control systems were operational by mid-December. In addition to local staff, external auditors were recruited to insure total program transparency and accountability. Since most of the entitlements for veterans were to be in the form of cash payable through local banks, it was imperative to ensure that the banking system was capable of establishing individual accounts for each veteran in a timely fashion throughout the country. Finally, the details pertaining to the transportation of veterans to their home districts were ironed out, and contracts were signed with transport companies.

Program implementation

Severe budget constraints meant that Uganda was unable to implement the Veterans Assistance Program without external financial support. At a meeting in Kampala in September 1992, several donors, including the World Bank, agreed to finance Phase I of the program, covering up to 23,000 soldiers (plus some 50,000 dependents), at an estimated cost of $19.4 million. This was some 7,000 fewer soldiers than originally planned for the first round because the time needed to identify potential veterans (volunteers, the ill and disabled, and redundant personnel) was longer than originally planned.

Phase I funding covers six months of settling-in assistance for each veteran and his dependents plus creation of the VAP administrative structure, including monitoring and evaluation functions. An additional $5 million was pledged for a longer-term training and skills development program.

Disarmament and discharge. The NRA is responsible for delivering soldiers to assembly points, and for disarming and discharging them. The Army command has promised that no veteran will remain in possession of any military equipment whatsoever to allay fears among the public that the demobilization program will result in increased law and order violations. As proof of veteran status, upon discharge, each soldier is issued a non-negotiable identification document and an entitlement contract. These documents not only enable the veteran to receive settling-in entitlements but also include a statement of the rights of inheritance for next of kin.

The settling-in package. Upon discharge, veterans receive a subsistence allowance to enable them to purchase civilian clothing, food, medicines, and other basic necessities for the journey. Once they arrive in their home districts, they receive additional short-term demobilization assistance and in-kind building materials. The second and last installment of entitlements provided under the six-month settling-in program are transferred to the veteran approximately 2 ½ months after

the first payment. Parent Teacher Association school fees for up to two children for a period of one year are also paid by the DVO directly to the school (Table 2).

According to the troop profile developed in the spring of 1992, two thirds of all NRA soldiers would like to take up farming. The working assumption of the VAP is that most will do so, at least for a period immediately following demobilization, making access to land crucial to the VAP's success. While only 30 percent of Uganda's arable land is currently in use, some districts may have difficulty in providing veterans with land. This will be particularly true where the soil is of moderate or poor quality or land is used extensively—for cattle raising, for example. District administrators and DVOs in these areas have been instructed to attempt to resolve land problems locally, but to report to the VAP Board if it proves impossible to find a solution at the district level.

Longer-term reintegration

The VAP assumes that veterans will be able to provide their own subsistence at the end of the six-month settling-in period. Given the educational, skill, and medical backgrounds of many veterans, however, additional targeted assistance will be necessary if ex-soldiers and their families are to become productive members of their new communities. The VAP thus plans to give particular attention to strengthening social services, providing a community support network for job and personal counseling, helping veterans gain access to productive assets and skills, and sensitizing the communities to the needs of veterans.

Social services. Half of the 23,000 soldiers to be demobilized in 1993 are being discharged because they are socially maladjusted, medically ill (including those with AIDS), or disabled. The current capacities of basic social services in many of the communities are likely to be insufficient to handle this additional burden. Communities with limited capacity in social services and a large number of returning veterans will, therefore, receive special assistance. Nongovernmental organizations (NGOs) and private sector agencies have been contracted to provide additional testing, counseling, and treatment during the first six-month settling-in period; these services will be extended in subsequent phases of demobilization if the efforts prove necessary and effective.

To combat the perception that veterans are receiving unjustified priority in the delivery of social services, these additional programs will be available to all members of the community. Equally important, existing testing, counseling, and treatment capacities will be strengthened, rather than supplemented by parallel services, as long as they accurately reflect local needs. In addition, the NGOs and other organizations will enhance local capacities to deliver such services by training staff. This social development dimension of the program is critical to reducing the stigma and fear often associated with ex-combatants and to closing the potential social distance between existing community members and returning veterans.

Job counseling, training, and access to productive assets. NRA veterans will have a wide variety of training and job counseling requirements. Although most intend to take up farming, many veterans do not possess adequate skills or knowledge to move beyond subsistence agriculture. Nonfarm employment opportunities will be limited by the veterans' lack of civilian sector employment experience, formal education, and marketable skills.

The feasibility study for the long-term reintegration package suggested a number of options, ranging from adult literacy courses and local informal vocational training to more formal technical courses at established training centers. Short-term technical training courses in carpentry, weaving, tailoring, welding, metal fabrication, bricklaying, agriculture, and fisheries may be administered through a training voucher system in which each veteran would receive vouchers usable at selected training institutions. Such an approach would enable consumer choice and flexibility, thus promoting a more "demand driven" and presumably relevant supply of training response.

NRA veterans also have few, if any, financial resources to fall back on and will require access to credit and other services to facilitate their entry into farming or to support the establishment of small enterprises. Participation in ongoing development projects, run either by the government or by NGOs, can provide some of the necessary support. It has also been suggested that a special credit scheme be established to support NRA veterans seeking to produce food and cash crops, raise livestock, or engage in fishing.

Sensitizing the community. To allay the concerns of communities receiving veterans and to sensitize community members to the special needs of veterans and their families, district veterans officers met with community leaders before veterans arrived in a community to explain the demobilization program, hear their concerns, and seek their assistance. Such meetings are expected to occur frequently over the life of the demobilization program. Other community-based projects are planned, including information and reconciliation workshops, measures designed to promote mutual trust, and counseling.

A successful beginning

Phase I of the demobilization program has been implemented efficiently to date. Between December 18, 1992, and April 1, 1993, some 20,000 soldiers (and their families) were discharged from the NRA and demobilized to their home villages.

The budgeting, financing, expenditure, and auditing of Phase I was also implemented essentially as planned. Only a few problems arose, and the VAP was seeking to address them: temporary homelessness, loss of discharge papers and cash payments, and AIDS-related deaths. There have only been a few instances of veterans committing criminal offenses, and these are being handled through the civilian criminal system.

Contracts were awarded for the staff development and the monitoring and evaluation programs by late February. The monitoring and beneficiary assessment program will provide feedback to management for program improvement; analyze the impact of the program on retrenched soldiers, their families, and their communities; evaluate the budgetary impact of the program; and provide information for the design of the second phase demobilization and longer-term reintegration programs. The staff development program trains the key implementers and managers of the program in their duties and responsibilities, problem solving and counseling techniques, communication skills, and management and administrative requirements.

At a two-day workshop for district veteran officers in early March, the experience of the

Administrative structure of the Veterans Assistance Program

"The Uganda Veterans Assistance Board Statute, 1992" provides the legal basis for the VAP and describes its administrative structure and operational guidelines. It establishes a three-tier administrative structure consisting of 1) the Uganda Veterans Assistance Board at the national level to set policy and provide general accountability; 2) the Executive Secretariat as the responsible implementing body at the center; and 3) District Veterans Offices (DVOs) to support the veteran and his/her family on a daily basis. The statute also calls for establishment of District Veterans Committees (DVCs) composed of members of the local administration. DVCs are to report to the Board on local implementation of the VAP.

first three months of Phase I was reviewed, and DVOs were trained in advisory and referral techniques as well as in methods for solving problems such as access to land and receipt of entitlements. In addition, by the end of February, communities were being helped to strengthen their basic services for veterans who are disabled, socially maladjusted, or suffering from AIDS.

By early March, the VAP executive secretariat had prepared a draft program for the longer-term economic reintegration of veterans. It is anticipated that this program, essentially oriented toward training and employment, will begin by the end of the first six-month period with financing from the German Government. This reintegration program may also be available to the estimated 20,000 plus ex-combatants of former struggles in Uganda who self-demobilized earlier. The executive secretariat has also prepared a plan for a Phase II demobilization of 10,000 soldiers, which will be discussed with donors in August 1993, following the monitoring and evaluation of the first phase demobilization.

Fad or new product?

World Bank participation in this bold demobilization experiment raises questions about the potential role of the donor community in such endeavors. While its roots are political, war to peace transition holds the promise of providing additional resources for development. Technically, it presents the donor community with the same transitory social and economic development problems of any transformation and adjustment process, be it industrial conversion, protection of the poorest and most vulnerable members of society, or the provision of a safety net for the human casualties of parastatal and civil service reform.

Containing defense expenditures through measures to improve efficiency—including improving financial management, auditing, and accounting systems—could contribute to the release of budgetary resources for more productive development purposes. But the overall reduction in force will have the greatest impact, particularly in sub-Saharan Africa, where the bulk of military expenditure is not on weapons but on personnel.

The Ugandan experience suggests that with careful planning it is possible for African governments to demobilize their oversized armies without social disruption and without undermining security. The savings from reduced military expenditures can contribute significantly to social expenditures of general benefit. ■

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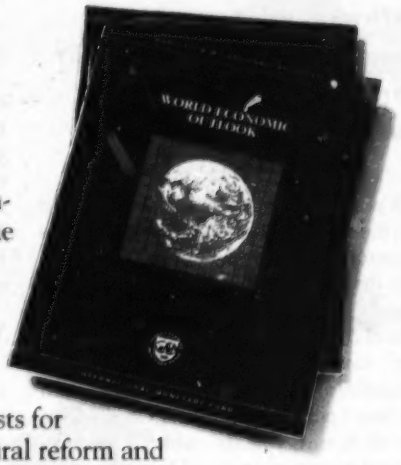
New from the IMF...

World Economic Outlook: May 1993



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Where We Stand with Renewable Energy

DENNIS ANDERSON AND KULSUM AHMED

RENEWABLE energy technologies are now being successfully used in numerous small-scale applications on a commercial basis and for some larger-scale power generation projects. For developing countries in particular, solar energy is an abundant and environmentally attractive resource, with enormous economic promise.

Each year, the earth receives an energy input from the sun equal to 15,000 times the world's commercial energy consumption and 100 times the world's proven coal, gas, and oil reserves. Modern solar electric schemes are capable of converting 10–20 percent of the incident energy into a form useful for consumption, and in theory they would need less than 1 percent of the world's land area to meet all its energy needs—which is less than the land areas now occupied by hydro reservoirs, and not much more than is planted for potatoes. Yet, despite the abundance and attraction of the solar energy resource, only a tiny fraction is used.

The situation, however, is changing. The last two decades have seen major technological developments for harnessing solar energy in ways that have greatly increased conversion efficiencies and reduced costs. Several of these developments were not predicted: for instance, the discovery in 1974 that an approximately 9:1 alloy of silicon and hydrogen is a semiconductor, or the possibility that the costs of photovoltaics (PVs) could fall by a factor of 50–100 in the course of two decades.

A once exotic and highly expensive source of electric power, suited mainly for satellites in space, is now an increasing source of electricity in villages, industry, and homes, and prospectively for large-scale power generation. When oil prices reached $30 a barrel, there was considerable commercial interest in renewables in the energy industry. Although this interest abated somewhat when oil prices later collapsed, the abatement was not great, as the costs of renewables have since declined too, with technical progress.

Renewable energy sources range from solar energy to various methods of harnessing wind, geothermal, and wave energy. Already, there are many commercial applications of each of these, but in this article, we will just focus on three technologies: solar-thermal and PV schemes for electricity generation, and biomass (crops and woody material) for the production of electricity and liquid fuels.

Why renewables?

Until recently, the argument for alternatives to fossil fuels—the justification for the nuclear power programs of the 1950s, 1960s, and 1970s—was that a backstop technology was needed in case we ran out of them. But the world's proven reserves of fossil fuels are very large, over 800 billion tons of oil equivalent energy (t.o.e.), of which 70 percent is coal and 30 percent oil and gas—enough to last a century at today's levels of consumption and for 50 years allowing for the growth of demands in developing countries. Further, these are only the commercially proven reserves, which have expanded appreciably for many decades. Industry estimates of ultimately recoverable reserves are about 4,600 billion tons, including 1,400 billion tons in oil shales and tar sands—sufficient to last us for the next 150 years or so, assuming continued growth in world demand over the next century. Thus the old backstop argument is no longer valid. Rather, the case is being made on three other grounds.

Economics. The economic case is that the technologies will eventually compete with fossil and nuclear fuels—and also with hydroelectricity. Indeed, they are already competitive for smaller-scale applications, and markets are growing. As the World Bank's *World Development Report 1992* noted, world energy demands are likely to double in the next 30 years and then treble to 20 billion t.o.e. in the next 40 years, even under an "energy efficient" scenario. This will put some pressures on costs and prices as the lower cost reserves are exploited and markets turn increasingly to synthetic fossil fuels in the oil and gas industries. It is worth remembering that a world energy market of 20 billion t.o.e. translates into a market of over $4.5 trillion per year at current world prices, more than half of which will be in the developing countries, and the economic gains from new, lower-cost energy resources would be considerable. Solar power would be especially suited to developing countries: there are huge areas where the incident energy (insolation) is 2,000–2,500 kilowatt-hours (kWh) per square meter per year—twice the levels found in the United Kingdom, the Netherlands, and Germany, for example.

Environment. That solar schemes have no net emissions of carbon dioxide, particulate matter, sulphur dioxide, or nitrous oxide is a commonly cited advantage, and there is little doubt that private investment and research and development (R&D) would be stimulated by the introduction of environmental taxes and regulations. In the case of carbon emissions, renewable energy is the only alternative currently available for development,

other than nuclear energy from fission and fusion, to stabilize carbon accumulations in the atmosphere should the need arise. Using energy more efficiently will help reduce the rate of growth of energy demands, but emissions are likely to grow even in an energy efficient scenario, and greater efficiency by itself will not solve the carbon accumulations problem. The evidence is still awaited as to the likely extent and consequences of global warming, but investments in renewables must be a required element in any precautionary policy. For example, a 25 percent level of savings from energy efficiency, equal to the whole of the world's energy consumption today, would still leave the world's energy consumption equal to three times today's level in 40 years.

Land and people. It is necessary to dispel the commonly held notion that solar energy is too diffuse to harness and would require too much land. For solar-thermal and PV schemes, land requirements are comparatively small. While they are greater than those of coal-fired plants, for example (excluding the mining area), they are considerably less than those of hydroelectric schemes. They typically require only one fiftieth to one twentieth of the land needed for hydro schemes—for the Aswan High Dam in Egypt, only one hundredth (see map). There is also much flexibility in the choice of site: the technology is modular, and the schemes can be located in arid areas with low population densities and need not compete with agriculture or forests or people for land. They would also yield very high levels of energy per hectare (e.g., the yield of a solar farm would be over 500 t.o.e. per hectare per year, assuming 10 percent conversion efficiencies, about 100 times that of biomass energy crops).

Solar-thermal energy

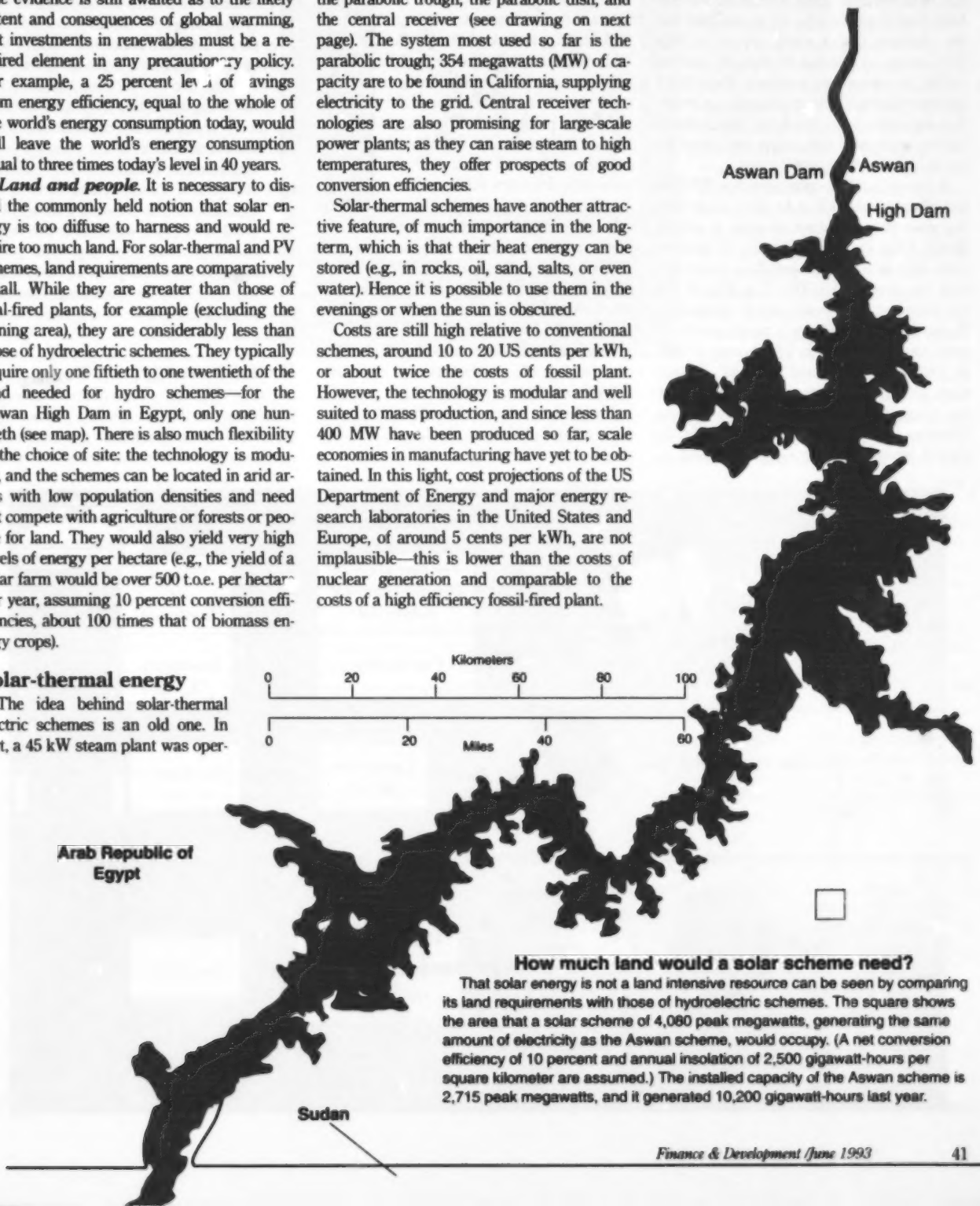
The idea behind solar-thermal electric schemes is an old one. In fact, a 45 kW steam plant was operating in Egypt in 1912, but was shut down during World War I because of cheaper fuel prices. The sun's energy is concentrated by mirrors onto a receiver that contains a fluid. The heated fluid is then used to raise steam to drive a turbo generator; the fluid may also be a gas that operates an engine directly. There are three main types of concentrator systems: the parabolic trough, the parabolic dish, and the central receiver (see drawing on next page). The system most used so far is the parabolic trough; 354 megawatts (MW) of capacity are to be found in California, supplying electricity to the grid. Central receiver technologies are also promising for large-scale power plants; as they can raise steam to high temperatures, they offer prospects of good conversion efficiencies.

Solar-thermal schemes have another attractive feature, of much importance in the long-term, which is that their heat energy can be stored (e.g., in rocks, oil, sand, salts, or even water). Hence it is possible to use them in the evenings or when the sun is obscured.

Costs are still high relative to conventional schemes, around 10 to 20 US cents per kWh, or about twice the costs of fossil plant. However, the technology is modular and well suited to mass production, and since less than 400 MW have been produced so far, scale economies in manufacturing have yet to be obtained. In this light, cost projections of the US Department of Energy and major energy research laboratories in the United States and Europe, of around 5 cents per kWh, are not implausible—this is lower than the costs of nuclear generation and comparable to the costs of a high efficiency fossil-fired plant.

Photovoltaic energy

Developments in PVs in the past two decades have been profound, as unit costs have declined by almost two orders of magnitude in a 20-year period (see chart). This is roughly the ratio of the average speed of a jet aircraft today to that of a stagecoach (including stops) 150 years ago—an immense techni-



How much land would a solar scheme need?

That solar energy is not a land intensive resource can be seen by comparing its land requirements with those of hydroelectric schemes. The square shows the area that a solar scheme of 4,080 peak megawatts, generating the same amount of electricity as the Aswan scheme, would occupy. (A net conversion efficiency of 10 percent and annual insolation of 2,500 gigawatt-hours per square kilometer are assumed.) The installed capacity of the Aswan scheme is 2,715 peak megawatts, and it generated 10,200 gigawatt-hours last year.

cal accomplishment, especially considering that public policies have actually worked against renewables by heavily subsidizing fossil fuels and nuclear energy.

The photoelectric effect was first described in 1839 by the French physicist Edmond Becquerel. In its modern application, in PV cells, light shining on a semiconductor material frees electrons from within the material from fixed sites; the cells are so designed that the electrons cannot easily return to these sites except by flowing through an external circuit, thus generating a current. The cells are connected to each other, packaged in a protective seal, and sold as "modules," which can be further aggregated into panels and arrays for use in higher-voltage applications.

In the early 1970s, costs were over $300,000 per kilowatt peak (kWp) for the module only, but since then they have dropped to around $6,000 kWp (including balance of systems costs such as structures and dc/ac converters, they are closer to $10,000/kWp). This is still too high for large-scale power generation. However, there has been a rapid growth of markets—from 1 MW in 1978 to over 60 MW in 1992—for remote and "off-grid" applications, such as telecommunications, health clinics, village lighting, and solar water pumps for irrigation and village water supplies. In the United States, PVs are also being used increasingly for providing supplementary power on distribution networks. These markets are still small in relation to the size of the electricity supply industry, about one thousandth of the annual demands for new generating capacity. But over 40 major manufacturers are investing in the technology, and several are gearing up for a second stage of larger-scale production, in anticipation of larger markets and further cost reductions.

A striking feature of the PV market is the wide range of approaches being explored—not only are several materials being tested and used, but alternative qualities of the same material are being tried. The competition for ideas is intense (always a healthy sign), and it is impossible to determine which ones will eventually dominate. First generation PV cells were based on thick-film single crystal silicon cells with high conversion efficiencies, the power source for most satellites. Since the mid-1980s, however, thin-film, amorphous silicon cells have come to occupy one third of the market; they are less costly, but have lower efficiencies. Further developments include:

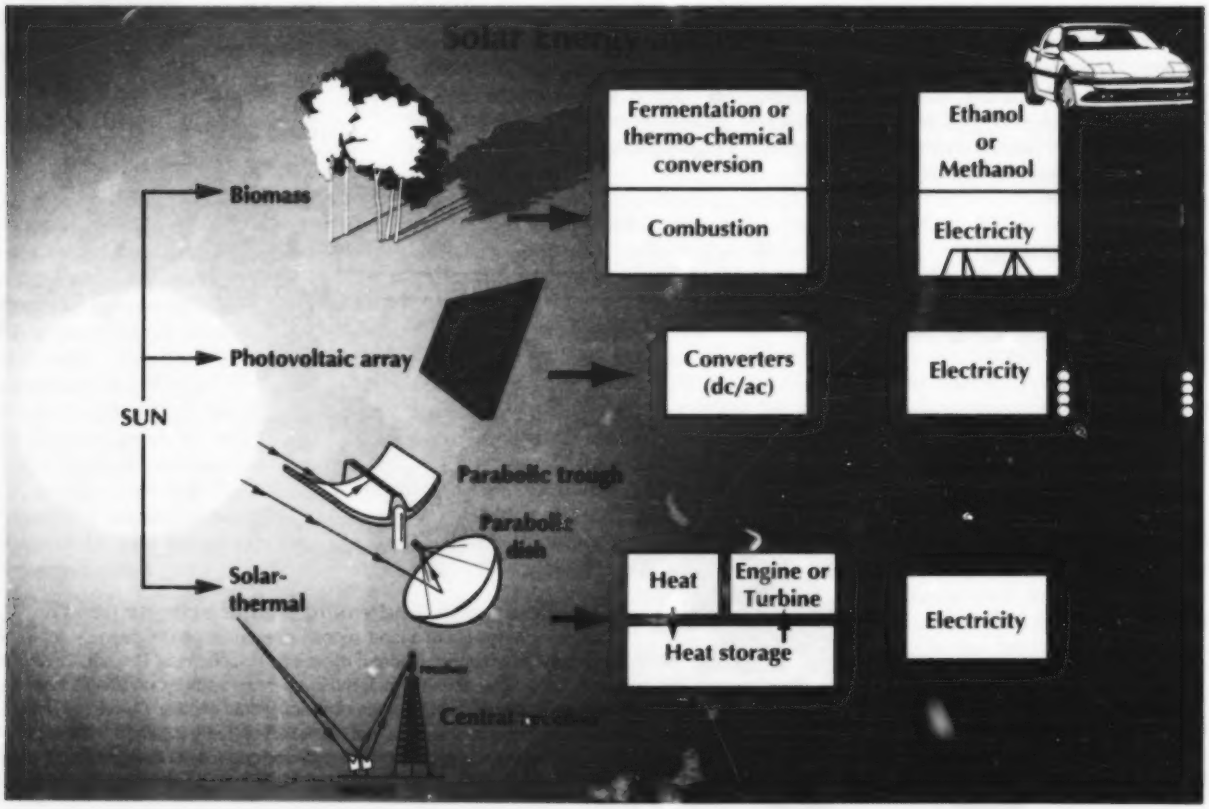
- the use of lenses to concentrate sunlight onto high-grade, high-efficiency cells (so-called concentrator systems);
- methods to increase the probability of photon capture by changes in the cell's surface shape;
- the use of multijunction devices to capture a greater portion of the solar spectrum; in the case of amorphous silicon cells, this has doubled efficiencies to 10 percent; and
- innovations in manufacturing to introduce batch production—something that is more likely as markets expand (scale economies have hardly yet been exploited).

The current efficiency of conversion of light to electrical energy for modules in the field is 3–17 percent, out of a maximum theoretical efficiency for high-grade cells of 47 percent. This is lower than the efficiency being reached in laboratories, which is 6–34 percent (depending on cell type). The lag between laboratory and field cell efficiencies is around seven years.

A long-standing problem with PV electricity is the cost of storage, particularly in off-grid applications. The common lead acid battery is still the option most used, but this is impractical, of course, for large-scale power generation. Much will depend on the development of the fuel-cell—a major area of research now for industrial countries interested in marketing an electrical car.

Biomass energy

Unlike PV and solar-thermal schemes, which capture the sun directly, biomass converts the carbon dioxide in the atmosphere into sugars and then re-releases the carbon

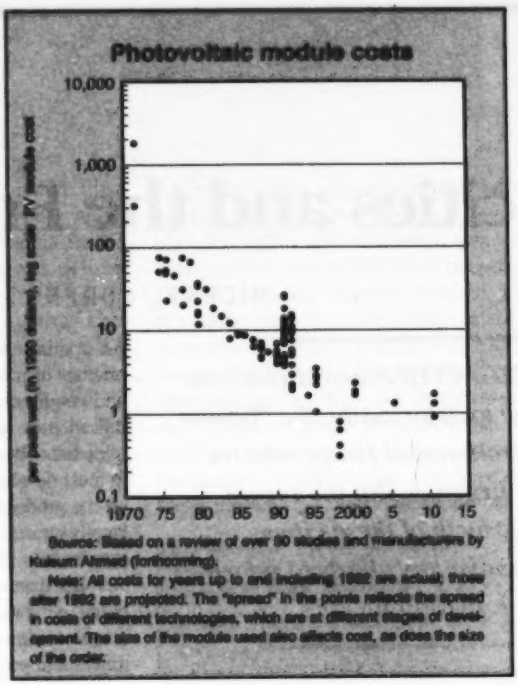


dioxide and energy when burned. It can be used directly to produce electricity—as in the numerous cogeneration plants found in agricultural regions, using the wastes from agro-industries—or it can be transformed to produce alcohol and gaseous fuels.

On the electricity side, a promising new development is the use of biomass gasification methods in electric power plant cycles to take advantage of the high efficiencies of combined cycle technologies. Emission control technologies are available to eliminate particulates and reduce nitrous oxides (there is virtually no sulphur). And if the biomass is produced in a sustainable way, the net emissions of carbon dioxide are negative on account of the enlarged standing stocks of biomass (the greater the number of trees, the more carbon that is stored). On the liquid fuel side, Brazil is now the biggest user of liquid fuel from biomass, in this case, from sugar cane.

Traditionally, there have been two key problems with using biomass as an alternative energy source. First, its cost was high relative to gasoline, although it is not widely enough appreciated how much costs have declined in real terms since the 1970s, owing to technical developments in fermentation and other parts of the process. In fact, costs were beginning to compare well with gasoline until the collapse of oil prices in 1986. Nevertheless, it will be difficult for ethanol to compete in the liquid fuel markets, and the best opportunity for biomass is probably in the higher value-added markets for electricity generation.

Second, it is land intensive. The maximum theoretical conversion efficiency via photosynthesis to useful biomass energy is 6.7 percent for crops such as maize and sugarcane and 3.3 percent for rice, wheat, and trees. However, in practice, the rate is only 0.2–3.0 percent. Thus, it is often rightly argued that the technology is best used, when it is to be used at all, in areas where the crops can serve other purposes, too (e.g., with tree plantations to restore degraded watersheds). This would also increase the economic returns to the projects. Further, a mixture of species is recommended, even if this raises costs, to avoid the environmental dangers of the monoculture syndrome.



Source: Based on a review of over 80 studies and manufacturers by Kulsum Ahmed (forthcoming).

Note: All costs for years up to and including 1992 are actual; those after 1992 are projected. The "spread" in the points reflects the spread in costs of different technologies, which are at different stages of development. The size of the module used also affects cost, as does the size of the order.

Energy policies

What can be done to encourage the development and wider use of renewables in a way consistent with the aims of good policymaking? First, the industrial countries in particular need to diversify their R&D portfolios. Not only does solar energy receive funding that is minuscule compared with fossil and nuclear technologies (about 5 percent of public R&D in energy) but its share of a declining budget has also been shrinking for the past 13 years. International collaboration on R&D also needs to be promoted, as it is in other areas such as agriculture.

Second, renewables would undoubtedly benefit from the adoption of commercial pricing policies for energy, along with an end to the deformities in the level and structure of energy prices arising from government controls and public monopolies. The costs of supplying peak-load electricity is 15–20 cents per kWh in many countries, not far from the costs of solar-thermal schemes with short-term storage. But few countries have adopted a policy of peak-load pricing and thus provide little incentive for developing storage systems. For large-scale power generation, where solar-thermal has immediate promise, and PVs medium-term promise, applications in developing countries are being stifled by the widespread subsidy of generation by hydro and fossil fuels. In many countries, prices average less than half of supply costs—around 4 cents per kWh when costs are typically over 10 cents per kWh.

At the international level, the Global Environment Facility (GEF) is providing an excellent opportunity to help test and develop renewable technologies in the developing countries. The facility is run jointly by the World Bank, the UN Development Programme (UNDP), and the UN Environment Programme, and was set up to finance the incremental costs on projects with global environmental benefits (in the areas of global warming, the destruction of biodiversity, ozone depletion, and the pollution of international waters). Already it is funding several renewable energy projects, such as the gasification of wood chips and sugarcane bagasse for power generation in modern gas turbines in Brazil, PV schemes in India and Zimbabwe, and several other technologies, such as wind (in Costa Rica) and geothermal energy. The Bank, UNDP, and several development agencies also are financing small-scale applications of renewable energy in many countries.

By facilitating market applications, the GEF and development finance will help to reduce costs and demonstrate the technologies, and, as noted, these technologies may well become justified on economic grounds alone. If so, this will not be the first example of a policy intended to address an environmental problem containing the seeds of an economic surprise. ■

For more information, see Renewable Energy, Sources for Fuels and Electricity, *edited by Thomas B. Johansson, Henry Kelly, Amulya K.N. Reddy, Robert H. Williams, and Laurie Burnham, Island Press, Fort Myers Beach, FL, 1993.*

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Megacities and the Environment

MICHAEL COHEN

AS MEGACITIES worldwide continue to deteriorate, the "brown" environmental issues take on new urgency. But the recent patterns of growth of these cities promise to make any efforts to reform that much more difficult.

One of the most obvious, yet ignored features of the development landscape in 1993 is the dramatic impact that megacities have begun to have on the world's economic, social, and political prospects for the 1990s. Even the June 1992 Earth Summit, which took place in one of the world's largest and most troubled urban centers, barely touched the problem. Distracted by global climate change, destruction of the rain forests, and the spectacular scenery of Rio de Janeiro, delegates failed to focus on the critical "brown issues"—polluted air, dirty water, and inadequate sanitation—that make people sick today.

It is ironic that the brown issues, most evident in the megacities, should receive so little international and national political attention. Traffic congestion in Bangkok or Mexico City has given new meaning to air pollution. The rapid expansion of squatter communities on the peripheries of Jakarta or Kinshasa has led to unprecedented numbers of poor households living without sanitation services. Nearly one billion people in the developing world still lack access to clean water for drinking and bathing. And for many, the water that is delivered comes from trucks—not pipes—and at exorbitant prices (see box).

This situation is more alarming when considered within the dynamic context of change. Populations are growing, the spatial area of cities is rapidly expanding, and the number of public institutions at the metropolitan, urban, and neighborhood levels is increasing. Moreover, the significance of urban-based economic activities has grown tremendously, now reaching more than 50 percent of GDP in most developing countries. Yet serious constraints exist on the productivity of labor and investment within cities, largely caused by infrastructure deficiencies, burdensome regulation, and the weakness of local institutions.

What then are the prospects for improving the quality of life in the world's largest cities? The short answer is not a reassuring one unless policymakers adopt a radically different approach.

Sprawling megacities

The problems plaguing urban centers, of course, are not new, but the situation has been deteriorating over the past decade. One feature that is new, however, is the sheer spatial size of these cities, coming on top of growing populations, which makes our ability to solve the problems that much more questionable. Many of the world's megacities have reached regional proportions. Metropolitan London is almost 100 miles across; Tokyo and New York have become entire regional economies; and Jakarta has grown from beyond its city limits to the Jabotobek region and will soon be joined with Bandung, once considered a distant secondary city.

This spatial expansion, in part fueled by subsidized energy prices in most cities, has sharply raised the cost of communication, transportation, and economic exchange—besides degrading the environment. In some cities, such as Los Angeles, this process has become a vicious cycle, as increased motorization and private car ownership further encourage urban sprawl—a classic case of how the low density use of land resources is closely related to the overall deterioration of the quality of urban air, land, and water.

In industrial countries, one way to try to reduce these costs has been the emergence of new urban nodes within metropolitan areas—the so-called edge cities in the United States. The idea is to use improved communications to reduce the importance of downtown proximity and locational advantages that led to the urban concentration of economic activities in earlier periods. In fact, many metropolitan areas (e.g., Barcelona) have deliberately sought to integrate the city center and periphery by strengthening transportation links and improving the "urban quality of life" in suburban areas, thereby reducing disparities between central and suburban areas.

But in developing countries, these disparities are worse. To begin with, the problem is more pervasive across countries. Since the 1970s, low-density residential settlements have developed on the periphery of almost every city and town, reflecting rational decisions by low-income households in the face of heavily regulated land markets that reduce the supply and increase the cost of urban land. The poor, in effect, are forced to find land where they will not be harassed by municipal bulldozers. Households with higher incomes occupy the more central locations, which means they have lower transport costs and thus can afford to send more than one wage-earner to the labor market. This is particularly true for people working in the informal sector where central location is often critical to being able to sell goods such as street foods or small items. In contrast, (lower-income) households living on the periphery must absorb heavy transportation costs if they are to have central employment. Moreover, these private costs add up to substantial public costs in terms of the environmental damage caused by transport-related air pollution.

The megacities of the third world must also contend with poorly developed infrastructures, particularly in communications. Businesses and new jobs have been created outside the center, straining links between central cities, peripheral settlements, new zones of economic activity, and the hinterland of small towns and the countryside. By the end of the 1980s, this process had reached a logical, if aberrant conclusion in São Paulo, which had more cars than telephones—the environmental consequences were predictable!

The expanding territory has also led to overextended administrations in developed and developing countries alike. During the 1970s and 1980s, many large cities established metropolitan authorities to maintain administrative coherence, resolve disputes between jurisdictions, and provide services of a cross-jurisdictional nature. The most celebrated case was in Toronto, where a broad framework was established encompassing the Toronto city government and surrounding municipalities—although by the early 1990s, even this framework was being called into question by the expansion of the metropolitan area to a regional scale. One driving force has been an appreciation of the transmunicipal and regionwide nature of pollution.

"Brown issues" prove costly

Bogota About 2,500 tons of solid waste is left uncollected every day. Some is partially recycled informally while the rest is left to rot in small dumps or in canals, sewers, or streets.

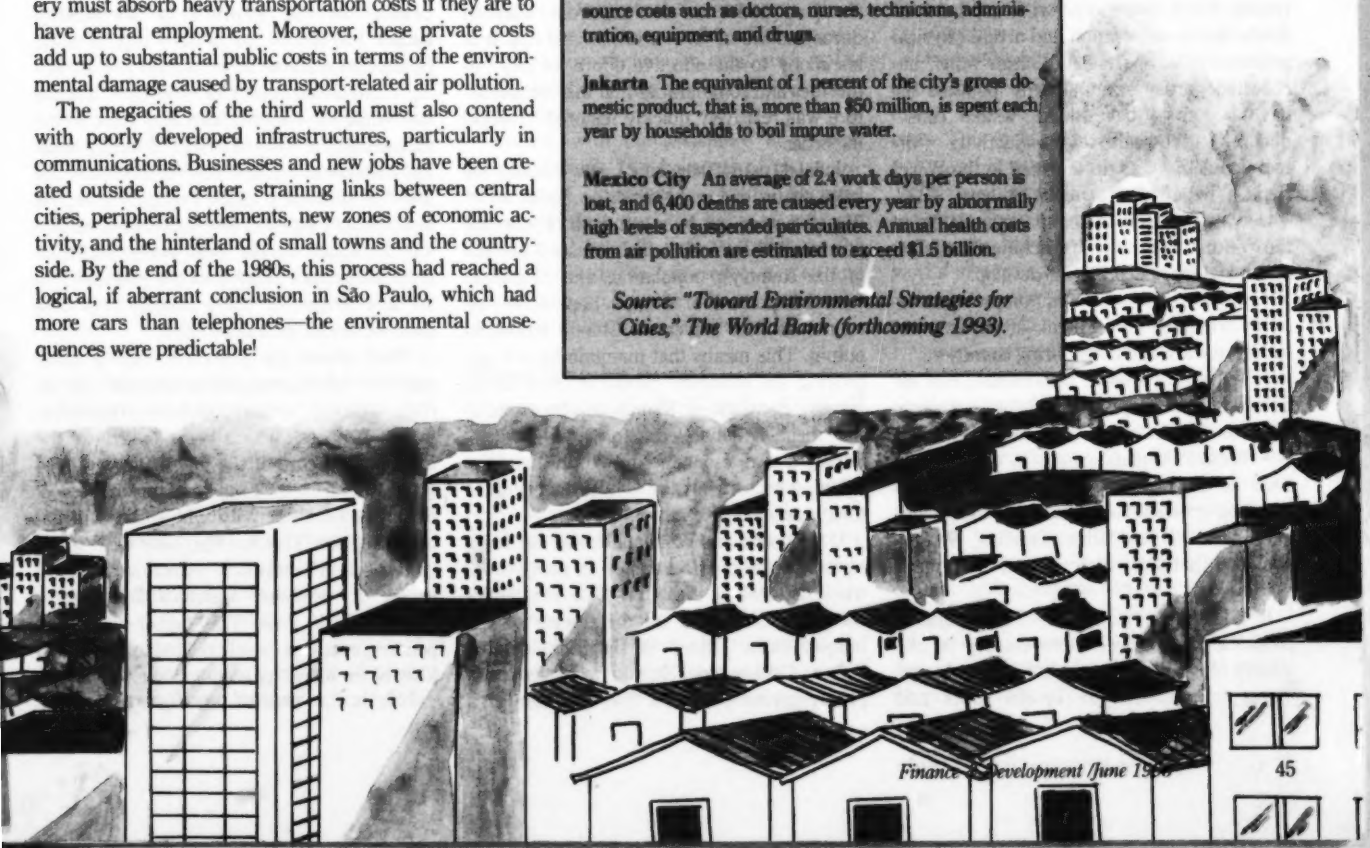
Bangkok Nearly 33 percent of the city's potential gross product is lost because of congestion-induced travel delays. This could rise to 60 percent if no remedial measures are taken.

Accra 70 percent of health care expenditures are linked to environment-related diseases—as in all of Ghana. The expenditures include productivity losses and health resource costs such as doctors, nurses, technicians, administration, equipment, and drugs.

Jakarta The equivalent of 1 percent of the city's gross domestic product, that is, more than $50 million, is spent each year by households to boil impure water.

Mexico City An average of 2.4 work days per person is lost, and 6,400 deaths are caused every year by abnormally high levels of suspended particulates. Annual health costs from air pollution are estimated to exceed $1.5 billion.

Source: "Toward Environmental Strategies for Cities," The World Bank (forthcoming 1993).



After resisting metropolitan government for many years, Los Angeles recently established the South Coast Air Quality Management District to manage the region's fight against air pollution.

For developing countries, however, there are few success cases to cite. Although many Asian and Latin American cities have reached metropolitan and regional scales (Calcutta, Bangkok, Bombay, Jakarta, Madras, Manila, Mexico City, Rio de Janeiro, and São Paulo, to name just a few), the high hopes of the 1970s have been frustrated by shortages of financial resources and technical skills, along with political squabbles between various levels of government over the management of urban services and the environment. Fiscal pressures on central governments have frequently resulted in responsibilities being turned over to local governments, but without the necessary financial resources. Within metropolitan areas, there has been the decentralization of responsibilities to smaller units. This has led, for example, in Abidjan and Dakar, to administrative models similar to the French metropolitan one, with decentralized communes within the metropolitan area.

Growing risks

Despite efforts to strengthen municipal management, there are few cities where the government seems to have appreciably improved environmental services. While a new rhetoric about local environmental problems has emerged, particularly after Rio, there is a readily discernible and growing gap between public sector exhortation and actual physical improvements. Shortages of clean water, uncollected garbage, and heavily polluted air have begun to have direct visible consequences on the health and productivity of urban populations, as documented in the World Bank's *World Development Report 1992*. These problems are not simply cumulative in their effects, but are now reaching thresholds beyond which new problems develop:

- In Lima, unsolved sanitation problems recently triggered an outbreak of cholera that spread quickly into neighboring countries.
- Studies in Bangkok demonstrate that air pollution is causing irreversible brain damage and loss of I.Q. in children.
- Blocked drainage canals in many cities, such as Buenos Aires, not only serve as breeding grounds for malaria but also result in a spate of new urban flooding—a phenomenon that some incorrectly term a "natural disaster."

It is not surprising that these dramatic problems undermine improvements in the quality of life that resulted from major investments in infrastructure in the 1960s and 1970s. Moreover, when infrastructure breaks down, it can create hazards by concentrating risks. Recent examples include the collapse of water tunnels in Chicago and water mains in Washington and New York. The situation can even turn disastrous when dense urban areas are involved. Take, for instance, the deadly sewer explosion in Guadalajara in 1992, which killed over 212 people and injured 1,000 others. This event, following incidents in Bangkok and Dakar by less than ten months, fits a pattern of increasingly frequent industrial disasters that started in Bhopal and Mexico City in 1984.

The cumulative problems caused by infrastructure deficiencies, disasters, and environmental hazards all contribute to worsening the conditions of the urban poor. Their number in developing countries is expected to grow threefold from 1990 to the end of the century, with the absolute increase going from 330 million to one billion people. A sizable share of that rise will occur in cities with populations ranging from one to five million people. The management of large city problems, therefore, will directly affect whether the poor have the basic services needed to improve their productivity and welfare.

These problems also hurt national economies, many of which already look to their cities and towns to generate more than half of GDP. Just witness what happened on the Chicago stock market following the 1985 earthquake in Mexico City, as investors quickly made calculations about the likely slump in production resulting from collapsed infrastructure in the world's largest city. It is testimony to the effective efforts of city authorities and communities that this infrastructure was relatively quickly restored to working order.

Indeed, many megacities now account for large shares of formal sector economic activity: 10 percent of India's industrial jobs are generated in Bombay, which houses 1 percent of the country's population, and Shanghai, with 1.2 percent of China's population, accounts for 12.5 percent of China's industrial output. This means that maintaining and improving the economic productivity of Cairo, Jakarta, Bangkok, or Manila will be essential for their national economies to develop. Simply stated, economic growth in many developing countries is unlikely if the health of their megacities does not improve.

If the social and economic stakes are high, so too are the political stakes. In many countries, national political life is heavily influenced by the mood on the streets of the biggest cities. Events in Bangkok, Beijing, Beirut, Caracas, or Nairobi at times completely preoccupy public life, resulting in a paralysis of public decisionmaking and economic uncertainty. Many observers have been shocked to discover that increasing bus fares and water tariffs in Caracas can touch off political instability and uncertainty of national proportions. At the same time, effective political management at the national and city level can contribute to the resumption of growth, as demonstrated in Mexico.

Changing dynamics

Clearly, the urban environment worldwide is deteriorating, at great cost to individuals and society at large. But before policymakers draft their agendas for action, they would do well to keep in mind some trends that are only now becoming clear.

First, it is apparent that the ***demographic growth of megacities—largely due to high fertility rates and not migration—is slowing down***, both in terms of their rates of growth and absolute magnitudes. Mexico City had been projected to reach the 20 million level by 1990; in fact, it reached 17 million. Similarly, Rio de Janeiro and São Paulo have slowed down their explosive demographic growth. While this pattern is most noticeable in Latin American megacities, reflecting the relative maturity of urbanization patterns, it also reflects the negative side effects of life in megacities. For example, during the economic adjustment programs of the 1980s, subsidies for urban services, food, and energy were sharply reduced.

Second, as a result, there is a ***parallel increase in the growth of secondary cities***. The second tier of cities (e.g., Ankara, Guadalajara, Kano, or Surabaya) are attracting rural-urban migrants who have learned that while job opportunities may exist in the megacities, the costs of living, including housing, transportation, and general amenities, are lower in secondary cities. Private investment in secondary cities is also increasing, reflecting the efforts of the local public sector to draw investment away from the megacities to the less congested, "more friendly" business environment of secondary cities.

Third, around the megacities, there is a process of ***"demetropolitanization"*** occurring, whereby urban population concentrations or nodes, which were linked to the metropolitan core of the city, have begun to grow away from the center and toward the loci of new economic activity, within larger mega-urban regions. This has also been termed "region-based urbanization," reflecting the emergence of extended metropolitan regions, particularly in Asia. This demographic dispersion process is closely related to the spatial form of the megacity economy itself.

Fourth, the ***spatial configurations of***

the economies of megacities are also decentralizing, no longer focused on city centers or ports. The trend is for megacity economies to be more closely aligned to the restructuring of urban economies, with new commercial and industrial activities within urban regions, whether in new zones or along transport corridors such as the highway between Rio de Janeiro and São Paulo, and the new industrial zones of greater Bangkok. A major aspect of this process is the decentralization of job creation. Whereas new firms and jobs had been created in small businesses or new industries in the city centers during the 1960s and 1970s, these firms have now matured and moved to the periphery, where new jobs are being created. The role of public infrastructure in supporting and "crowding in" private investment on the urban periphery is very important in this process, not in terms of traditional approaches to industrial estates, but rather in public support of trunk power lines, roads, and water supply.

Fifth, as economic and demographic processes experience centrifugal forces, ***the system of metropolitan governance is also breaking down***, because many municipalities no longer obtain benefits from adhering to metropolitan frameworks. Fiscal crises in most countries have reduced the capacity of large metropolitan governments to provide resources for investment and the operation of urban services. Indeed, in addition to the already serious problem of coordinating sectoral policies and investments within specific cities, there are few resources for "systemic" use at the metropolitan level to deal with regionwide issues, such as the disposal of urban wastes and the protection of natural resources.

Many of these issues require both financial resources and institutional coordination, yet the dispersion of scarce institutional capacity and resources within individual municipalities means that it will be difficult to undertake regionwide initiatives. This is heightened by growing democratization in Latin American and African cities, which has accentuated the autonomy of individual neighborhoods and municipalities from existing urban political institutions and hierarchies. The weakening and in some cases disintegration of metropolitan frameworks, along with the spontaneous, amoeba-like growth of urban regions, do not thus bode well for effective public policy and coordinated action at the mega-urban region and metropolitan level. Total institutional capacity may not have diminished in absolute terms, but further fragmentation in responsibility may well have resulted in weaker, not stronger, governance.

Sixth, as the force and energy of private economic activities dominate the demographic, spatial, and institutional patterns of megacities, the public sector may be too weak to effectively regulate private behavior. As a consequence, ***there may be a decline of coordinated public action in the "public interest"*** at the metropolitan and regional scale. This may include helping those who do not benefit from growth (i.e., the urban poor). As institutions are decentralized and financial resources reduced, there may be fewer opportunities for redistribution toward the less fortunate. Given the differences in economic welfare, infrastructure, and social services within urban areas, fewer resources will be available to maintain minimum levels of services within and across large jurisdictions. Consequently, greater disparities in income and opportunity will become evident within cities. Declining concern with the "public interest" is also particularly bad news for the environment, whose management requires some level of cross-jurisdictional coordination in areas such as the management of water resources, solid waste, or air pollution.

Seventh, with the assistance of modern communications, ***the failures of these institutional processes will become more visible*** at the local, national, and even international level. If it is true that, as the Greeks believed, the conscience of men and women is located in the eye, we will be increasingly uncomfortable in the future.

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What is to be done?

Given these trends, the following points will be critical for any agenda for action:

Metropolitan and regional governments must be strengthened around urban areas. New forms of jurisdiction must be developed that maintain the common interests among populations and the various institutional units that govern them. A failure to increase attention to shared interests will lead to dangerous centrifugal forces that will undermine the management of some of the most precious natural resources, such as river basins. It is beyond the scope of this article to spell out such a program, but a first step would be to focus on the "rules of the game" that govern central-local financial and institutional relations to assume a balance between central capacity to govern and regulate, and local autonomy to construct, operate, and maintain interests.

The political solutions that determine metropolitan outcomes depend on local political awareness. If citizens understand that their quality of life depends not simply on their neighborhood government, but on the functioning of a broader set of institutions, they may insist on strengthening institutions at a higher level citywide. Decentralization of authority is an important step toward engaging citizens, but it must be linked to this broader institutional framework.

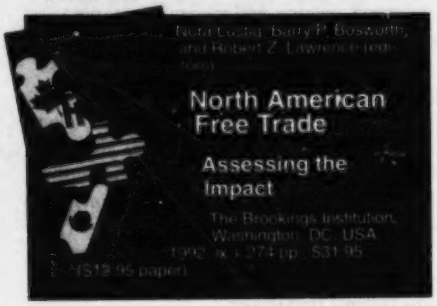
The success of environmental policy depends fundamentally on the behavior of individuals. Everyone shapes environmental policy by making the many small decisions about what to do with their waste products, how much energy or water they use, and what prices they are prepared to pay for natural resources. This behavioral aspect of environmental policy leads to the need for intensified efforts in broad-based environmental education throughout metropolitan areas. However, this education must be accompanied by more realistic pricing of resources such as water or energy to motivate people to behave in an environmentally responsible manner.

In parallel with new efforts to strengthen the performance of metropolitan institutions, it is essential to upgrade the financial and technical management of subsectoral agencies such as water utilities, transport authorities, sanitation districts, and the many institutions managing individual natural resources within cities. This includes better cost recovery policies covering subsectoral investments.

There is a need for experimentation and innovation. There must be a broad exchange of experiences across cities to understand what works in particular places and whether it is suitable for transfer to other locales. The achievements in public transportation, solid waste management, and energy efficiency of Curitiba, Brazil, are examples of how good practice—through integrated policy, planning, and investment—can produce outcomes in the quality of life at par with or even above that found in industrial countries. Simple, yet unusual practices of giving bus tokens to slum dwellers to encourage them to bring garbage to collection points, or exchanging vegetables for recyclable materials, can suggest new ways of managing problems. A critical dimension of this process is learning, taking advantage of the myriad human interactions that are the heart of the megacity itself. ■

BOOKS

NAFTA: The Good, The Bad, and The Unknown



Well, there's good news and bad news about the North American Free Trade Agreement (NAFTA). The good news is that the costs of adjusting to it will be insignificant (assuming it is ratified and takes effect and further assuming you are not a Mexican rain-fed corn grower). The bad news is that the benefits are not anything to get excited about either. That's the bottom line that emerged from a series of papers presented at a Brookings Institution Conference in April 1992, which are now published, along with comments from other conference participants, as the current volume.

The book's chapters are six papers from the conference—covering general equilibrium models, labor issues, industry, agriculture, non-trade issues, and effects on the non-NAFTA countries—plus a very nice and comprehensive summary chapter by the editors. The papers break no new ground in data analysis, but are intended to be surveys of extant literature. Comprehensive surveys they certainly are—to the point that after reading details of a number of the same studies for the third time in as many chapters, a reader (this one, at least) might wish there had been some heavy-handed editorial intervention.

The theme of "no pain, (almost) no gain" is one that runs throughout the paper. One major reason for this conclusion is that NAFTA is not, after all, really a free trade agreement. If it were, it would be one page (or one sentence) long; instead, it is hundreds of pages and, judging from President Clinton's rhetoric about amendments, still with ample growth potential. The "sensitive" sectors (e.g., agriculture and automobiles) with potential for significant pain for producers and gain for consumers will continue to be treated delicately. And in other sectors, tariffs are already low—6 percent on average in the United States and 13 percent in Mexico. The maquila (assembly) sector in Mexico already allows the shifting of unskilled labor-intensive production, further undermining the incentives for large new shifts. From the viewpoint of other, more efficient producing countries, trade diversion (crowding out of their exports to the North American market by Mexican exports) is likely to be quite small (a fraction of a percent) for the same reason—not much will change. The Central American and Caribbean countries will presumably continue to enjoy their preferential market access, which will not be greatly compromised by a drop in already minimal US tariffs.

Furthermore, many of the changes that could otherwise amplify NAFTA's effects are things that would happen anyway. As Tim Josling argues, the Mexican Government will for its own reasons continue to dismantle the marketing, trade, and land tenure system that has protected agriculture but put it in a straitjacket. Robert Crandall argues that the same is true of industry. And in the United States, the industries that would be hurt by free trade with Mexico are dying anyway from other competitive pressures.

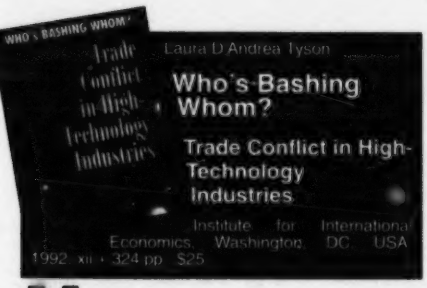
In keeping with the theme, Robert Pastor concludes that the cries of alarm over noneconomic issues are also misplaced. There is no good reason to expect polluters to flock to Mexico. Pollution control technology is low-cost and hard to unbundle from production technology. The effects along the border are likely to be to reduce the concentration of polluting maquiladoras. And within Mexico, pollution control will gradually improve with higher incomes from NAFTA. Still, as Gustavo Vega-Canovas argues, it is neither likely nor desirable that a low-income country would adopt pollution control standards as stringent as those of the developed world.

On political issues, Mr. Pastor sympathetically quotes Hector Aguilar Camin, a prominent writer reportedly close to President Salinas, in a Friedmanesque argument that the greater economic liberty from the NAFTA will inevitably lead to greater political freedom. Probably true, but once again one wonders if NAFTA is really a significant factor in Mexico's economic and political liberalization.

There are a few discordant notes in the overall symphony of rather neutral conclusions in the papers—some quite optimistic and some alarmist. Among the latter is Carlos Primo Braga's expression of fear that NAFTA's maze of new rules of origin and other nontariff restrictions may be a step forward, rather than backward, along the road to managed trade perdition. I suspect Jagdish Bhagwati would agree, though the argument here involves a fair amount of crystal ball gazing.

Some of the other studies indicate strong positive or negative results from NAFTA, but there is reason for those in the economic profession to be somewhat uneasy—not because of what they show, but rather how they show it. Virtually all of these rely on dynamic effects, particularly capital and labor flows, to reach their conclusions of big gains or losses. The problem with these models is that they have, as Raúl Hinojosa-Ojeda and Sherman Robinson euphemistically put it, "no discernable roots in trade theory." Consequently, they rely on the use of such artificial devices as Keynesian multipliers (to estimate long-run growth), a fixed ratio of employment to trade volume (to estimate employment effects), and a fixed quantity of investment (so that increased investment in Mexico must come from a corresponding reduction in US investment) with a fixed labor-capital ratio. Although they do point out some of these weaknesses, the authors treat these models with more seriousness than they deserve, mainly because so few offer anything better. But therein lies the source of my unease. If the only way to show a significant impact is through dynamic effects, which are not (or cannot be) well modeled, we seem to be left with *Hamlet* without the Prince. The authors never reach this conclusion, but the overall corpus of evidence shows as yet little basis for optimism, pessimism, or even neutrality about the effects of NAFTA—only agnosticism.

John Nash


WHO'S BASHING WHOM?
Trade Conflict in High-Technology Industries
Laura D'Andrea Tyson
Who's Bashing Whom?
Trade Conflict in High-Technology Industries
Institute for International Economics, Washington, DC, USA
1992 xii + 324 pp $25

Motorola, in the 1950s, was the first company to develop a cellular telephone system. In 1984, when the company began efforts to sell in the budding Japanese market, it had a significant technological lead over Japanese producers. But Japan's initial standards, drafted by a board made up of representatives of Japanese producers, excluded Motorola's products. Only after stringent intervention by the US Government were the standards amended to allow use in Japan of any of three technologies, including Motorola's. At this point, Japan's Ministry of Post and Telecommunications became the vehicle for fending off Motorola—who was, by then, operating as a joint venture with a Japanese partner. Assignments of regional concessions, of radio frequencies, and so on, Ms. Tyson explains, were systematically used to retard Motorola and to allow Japanese companies to make up Motorola's technological lead.

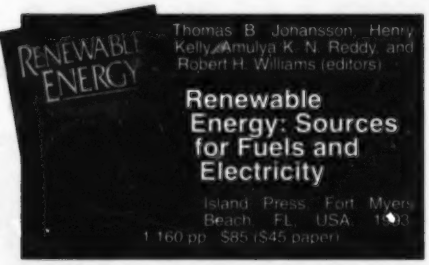
By presenting several such cases, Ms. Tyson achieves her first objective: to plead the partisan case of US high-technology companies. These incidents, she concludes, mean that "foreign intervention . . . exists and it works to the competitive disadvantage of American producers" (p. 253). What sort of policy, then, does Ms. Tyson recommend? Though she repeatedly refers to herself as a "cautious activist," she counsels little caution in this book. As to trade policy, she recommends that "the nation's trade laws be used to deter or compensate for foreign practices that are not adequately regulated by existing multilateral rules" (p. 13).

Ms. Tyson, however, has little faith in multilateral rules: "All too often, the choice between self-serving unilateralism and cooperative multilateralism does not exist" (p. 13). "Self-serving unilateralism" is almost always the bottom line. For example, Ms. Tyson concludes that the GATT's rules about subsidies are inadequate. She sketches her recommendations as to what the rules should be, but then concludes: "If the final Uruguay Round proposals do not satisfy these requirements, as seems likely at this time, the United States should reserve the option of exercising national CVD [countervailing duties] relief against foreign high-technology targeting programs masquerading as precompetitive R&D [research and development] or regional subsidies" (p. 285).

Ms. Tyson's domestic policy would begin with subsidies for selected products and technology. But the US Government would intervene much more directly than that into US business. For example, she argues that part of the present plight of the US commercial aircraft industry is that several times in the past an American company chose to develop an aircraft that turned out to be the wrong one—as market realities evolved. Ms. Tyson criticizes the US Government for failing to intervene "to head off these decisions and to coordinate the industry at this critical juncture" (p. 215). The "how to" is not specified.

In sum, this book is a forceful call for governmental help for US high-technology companies, and Ms. Tyson is an aggressive critic of past policies. But why does she keep calling herself a cautious activist? Nothing she presents in this book provides any basis for caution. The idea behind this repetition seems to be that if the reader can be conditioned to accept that Ms. Tyson is naturally cautious about such things, he or she will be more inclined to accept her case for intervention in favor of high-technology companies. "Cautious activist," it turns out, is the hi-tech version of the old political bromide, "Argument weak, speak louder."

J. Michael Finger


RENEWABLE ENERGY
Thomas B. Johansson, Henry Kelly, Amulya K. N. Reddy, and Robert H. Williams (editors)
Renewable Energy: Sources for Fuels and Electricity
Island Press, Fort Myers Beach, FL, USA, 1993
1,160 pp $85 ($45 paper)

On seeing a tome of a thousand-odd pages on renewable energy, many people working in the energy field would be struck by a sense of *déjà vu*. Twenty years ago, with the first of the "energy crises," renewable energy began to be vigorously promoted as the way to escape the "limits to growth." Multinational oil companies seemed to be positioning themselves to redefine their missions as "energy supply," with strategic acquisitions of many non-oil resources and even some renewable energy interests. Power utilities promoted themselves as energy service companies, and many found themselves required to buy in energy generated by renewable sources such as windmills. But then oil prices dropped from historic highs and many of those organizations returned to their core business.

Because essentially the same renewable energy technologies were considered then as now, what requires one to take a second look? Clearly, one reason is the combination of substantial technical progress, the cost reductions, and the wealth of operating experience that have accumulated since 1973. Another is that renewable energy is now seen as the way of ensuring environmental sustainability generally and not just resource adequacy and security. Specifically, renewables do not increase the atmospheric load of greenhouse gases and help avert the threat of global warming.

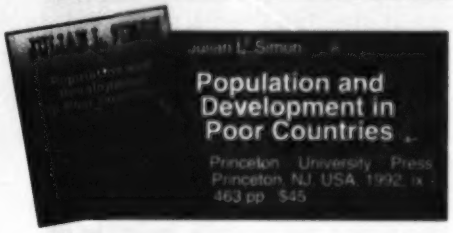
This volume was prepared as an input to the United Nations Conference on Environment and Development, held in Rio de Janeiro, Brazil, in June 1992; it was commissioned to "assess the technical and economic prospects for making fuels and electricity from renewable energy sources." The objective of the report, which is implicit in the method used, is to provide reassurance that high economic growth can be accommodated using a combination of renewable energy and energy efficiency. In fact, a major finding is that not only is a "renewables-intensive" future technically possible but renewable energy also will cost less than that usually forecast for conventional fuels; and its use will bring environmental and other benefits at no additional cost.

Renewable Energy is an excellent sourcebook of technology assessments, case studies, and operating experience on all the major renewable energy

sources. Practitioners, research and development policymakers, utility planners, and those involved with technology transfer will all profit from dipping into it; it has a wealth of material collected by the "Who's Who" of renewable energy. It will also provide data and assessments that will feed into strategic work.

The work, however, has a few shortcomings. One is that it is not fully integrated. The twenty-two reports of the technologies are individualistic and differ in nature—some are technology assessments, others case studies. There seems to be no comprehensive matrix that guided the overall study, and the studies are not strongly related to the "scenario" described in Chapter 1. Another shortcoming is that the role of policy is left unclear. Because the report is optimistic about the low costs and additional benefits of renewable energy, it seems to undermine its own caveats about "strenuous efforts" and "accelerated policies." General economic and institutional reform would seem to be sufficient, no case has been made for additional specific action. Finally, the report does not pursue the strategic questions systematically: how can one ensure that the costs of depletion (including overexploitation of renewable resources) and environmental impact are adequately reflected in decisions? How should research and development in renewables be supported and at what level? Are there financial, institutional, or other barriers to the efficient use of renewable energy sources; how might they be overcome; and what would that cost?

Kenneth King


Julian L. Simon
Population and Development in Poor Countries
Princeton University Press
Princeton, NJ, USA, 1992. ix + 463 pp. $45

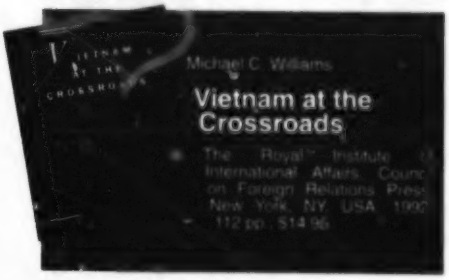
This lengthy book is a collection of the author's earlier essays, published between 1973 and 1990, addressing the broad question of the consequences of population growth for economic development. The reference to poor countries in the title may be misleading, as most of the essays make reference to these countries only in the tables and regression analyses. Instead, the focus of the book is on the advantages of population density that have accrued to some middle-income and more developed countries, and broadly on the ability of societies to cope with, and sometimes take advantage of, the economies of scale that can accompany population growth.

Reference to poor countries is generally restricted to observations about how government mismanagement may be more of a barrier to their economic prospects than is high fertility and rapid population growth. That view may be correct, but the statistical analyses offered in this book neither confirm nor negate it. What is missing is any penetrating analysis of population and development interactions in today's poor countries.

A major contribution is to remind readers of the need for research on the consequences of population growth, such as the interactions of high fertility and extreme poverty in the rural areas of the poorest societies; the negative (and possibly positive) effects of additional children on their own siblings, other members of their community, their larger society, and the world as a whole. Some calculations suggest that preventing unwanted births among the poorest people of the globe could contribute more, at lesser cost, to reducing global environmental problems than will costly, high-technology approaches in the industrial countries. Such issues demand further analysis. Professor Simon has worked continuously in these areas for two decades. If his work seems at times unnecessarily tendentious and argumentative, it is perhaps the inevitable result of espousing unpopular views. He differs with those who argue for public provision of family planning to the poor on a purely voluntary basis. Analysis of the consequences of population growth for the poor, something this book's title seems to promise but does not deliver, deserves the high priority that Professor Simon urges for it.

Professor Simon argues at several points that the risks of coercive population policies are greater than the gains that might accrue from public family planning programs that fill unmet need. This caution in defense of liberty deserves consideration, but failing to help those in need who can be helped must also be avoided. There is plenty of room for public and private action to address unmet need, since one out of four women in developing countries say they want no more children, or want to space future births, yet lack access to effective means to control their fertility. The success of programs in such poor countries as Bangladesh and Zimbabwe attest to the utility of helping families too poor to purchase these services and too ill-served by limited availability of private sector outlets for modern contraceptives. Professor Simon tilts too far against a proper role for government in support of the needs of the poor.

William McGreevey


Michael C. Williams
Vietnam at the Crossroads
The Royal Institute of International Affairs. Council on Foreign Relations Press. New York, NY, USA. 1992. 112 pp. $14.95

What chance would you give a country that in the mid-1980s was classified by the United Nations as one of the 20 poorest in the world; that has a legacy of almost half a century of armed conflict; that for long had (and some would say still has) an outmoded political system; that is up against a US trade embargo; a country whose biggest export market collapsed in 1990; to whom foreign aid—never abundant anyway—has dried to a trickle; that has had virtually no access to international capital markets; and which, until recently, had few friends in the world?

Well, in 1991, Vietnam's economy grew at an average annual rate of about 10 percent (compared with 3 percent in

1986); its exports hit a record, topping $22 billion; and foreign investors poured in more than $1.2 billion—more, that is, than they did in India or Korea. Its agricultural achievements have been particularly admirable. From a situation of near famine in 1986, Vietnam has now become the world's third largest rice exporter, after Thailand and the United States. It also looks set to become a substantial oil producer. Vietnam, in short, has not merely turned around, but is booming. This highly readable little book is about how it all happened.

Much of the story is, of course, about Vietnam's economic policy revolution—notably, its acceleration of liberal reforms under the program of *doi moi* (economic renovation) from December 1986 on. The book provides an illuminating guided tour of the tortuous road to reform since 1975: the reunification of the country, the south's absorption of the economic practices of the north (which closed the door to many of the south's external economic links); the disastrous results of the Stalinist policies in the second half of the 1970s; the tentative reforms of 1981-85, under which the agricultural sector was partially freed; the coexistence, for a time (even after 1986), of central planning alongside market-type relations; and then the rapid liberalization of the price, wage, trade, and exchange systems, combined with market-oriented institutional reforms that bring us to the present.

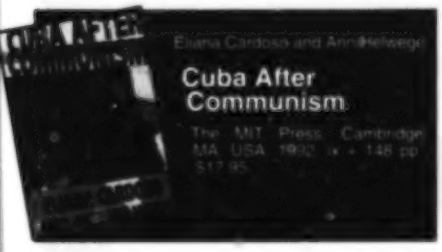
But the book's essential focus is not so much on what the reforms were or their effects, but how they took shape. As they were being devised, an intricate political drama was being played out in the background. The book traces the kaleidoscopic political changes that were part of this drama. It shows how economic policy failures created political pressures, which, in turn, catalyzed new policies. It tracks the constant see-sawing between the "reformists" and the "hardliners," especially since the early 1980s, and the alternate fading in and fading out of personalities from each camp. And it analyzes how the Vietnamese communist party—which never really loosened its grip on the system—struggled with apparent contradictions such as pursuing more market-based economic approaches on the one hand, while maintaining the "socialist way of life" on the other.

At the end of the day—and even though the Vietnamese economy still faces many uncertainties and dangers—the reforms must be said to have been a success. Comparisons with what is going on in Eastern Europe and the states of the former Soviet Union will inevitably be made. And quite reasonably, too. For after all, Vietnam has also struggled with the horrendous legacy of rigid central planning—with distorted prices, triple digit inflation, bloated and inefficient state enterprises, shortages, mounting debts, a huge underground economy, a malign neglect of agriculture, and state control of foreign trade. It has, moreover, had to cope with the same sort of external shocks that have hit Eastern Europe in the wake of the collapse of the Soviet Union, and more besides.

Vietnam's relative success in such circumstances raises many questions, some of them awkward, that must be faced. For instance, does it suggest that a sick, centrally planned economy can be transformed just with sound policies and very little external assistance? Does it throw any light on the "gradualism versus shock therapy" debate? Has Vietnam done much, in terms of economic policies or their implementation, that is different from what the countries of Eastern Europe and the former Soviet Union have done or are planning to do? If not, does it follow that they too, will boom; that it is just a matter of time? Does it matter that Vietnam is in Asia whereas most of the other former centrally planned economies are in Europe?

The book does not really come to grips with these questions. To be fair, however, some of them are beyond its scope; addressing them would call for a more in-depth scrutiny of economic policies and their application than this book attempts. But no such scrutiny would be complete without an understanding of the political context in which Vietnam's economic reforms took place. In providing such an understanding, this book does scholars of the Vietnamese economy, of which there will be many more to come, a great service.

Vikram Khanna



Last November, a Cuban government delegation led by Jaime Crobot, Vice Chairman of the Council of Ministers and member of the Communist Party Central Committee, visited Hanoi. It was more than a routine courtesy call on a socialist brother country. Certainly, there were mutual assurances of solidarity, and Vietnam promised shipments of rice to help alleviate food shortages in Cuba. Yet, perhaps the main item on the agenda was what Cuba could learn from Vietnam's experience with transition from an economy modeled on the Soviet prototype to a modern market economy.

The authors of this book would agree that Cuba could do worse than take its cues from Vietnam. Indeed, that country provides a precedent for the apparent consistency of officially professed adherence to communism with private enterprise and private property. Cardoso and Helwege make a compelling argument that transition to a market economy holds out the only realistic prospect for peaceful change and eventual prosperity in Cuba. At the same time, they emphasize the arduousness of the road and call for government measures to meet basic social needs in health care and education, temper inequalities in income distribution, and protect the environment. They speak of the difficult choices that will have to be made to reconcile those objectives with the hard budget constraint and financial discipline essential to stability and sustainable growth.

The book makes excellent reading, not only for those concerned with Cuba but also for anybody interested in the broader issue of transition from a defunct economic system. The methodological approach of the book is one of its main virtues. It lays out the recent history and current status of the Cuban economy. It demonstrates that the economy is at a dead end

and that business as usual cannot but fail. It explores different alternatives to restart the economy, with emphasis on its endowments and on the environment in which success will have to be achieved. All along, the book is a model of comparative economics. Whatever Cuba has tried or may attempt is put in the context of policies pursued by other Caribbean or Latin American countries. Hence, the authors' recommendation for Cuba is informed with the experience of failure and success elsewhere in the region. And it is, for that reason, all the more persuasive.

The authors also pay attention to political conditions. Their argument is unexceptional—that the United States and Cuba should end the cold war between them; that the rule of law must replace dictatorships of any stripe; and that a minimum of social justice must be secured. Otherwise, appropriate reforms would come to nought if the country were to succumb to chaos.

Erich Spitaeller

BOOKS *in brief*

Helen Hughes (editor)

The Dangers of Export Pessimism

Developing Countries and Industrial Markets

International Center for Economic Growth, San Francisco, CA, USA, 1992, ix + 446 pp., $14.95.

Former World Bank official, now professor and executive director of the National Centre for Development Studies at the Australian National University in Canberra, Hughes has pulled together, as editor, twelve case studies on individual developing countries and five papers with a wider orientation, nearly all by researchers from developing countries. The topics differ considerably from one study to the next. The book is well named, however, since a common thread is the potential for expanding manufactured exports. Countries whose decisionmakers have recognized the possibilities have generally done well, while export pessimism has indeed proved dangerous and unjustified.

Unfortunately, the papers are by now years out of date, with the latest trade data for 1987 or earlier. Six of the country studies focus on Asian success story countries—China, Indonesia, Republic of Korea, Malaysia, Singapore, and Thailand—while the rest look at countries not considered an export success, though many have now become so—Argentina, Colombia, India, Mexico, Papua New Guinea, and the Philippines. The subjects and approaches vary widely, ranging from garment and textile exports (Thailand), to the role of the government in export success (Singapore), to growth of non-oil exports (Indonesia). None of the papers, however, goes significantly below the surface into the nuts and bolts of the policy instruments, detailed reforms, and institutional innovations actually used in the successful countries. Instead, trade patterns and country features tend to dominate the story told in most of the studies, often to a fault.

John Leiche (editor)

International Economic Policies and Their Theoretical Foundations

A Sourcebook

Academic Press, San Diego, CA, USA, 1992, xi + 988 pp., $55.

This book, made up of a collection of articles, is intended to provide students and policymakers with both theoretical and practical insights into the workings of the international economy. It is ten years since the first edition hit the streets and, as the preface notes, much has changed in the international order. Gone are the many vestiges of planned economies, large trading blocs are forming, and the pendulum is swinging back in favor of more managed exchange rate regimes. The latest edition seeks to address some of these and other changes by including 16 new chapters and providing updates on many of the original articles in the book. Some readers will perhaps find, however, that rather more editorial discretion could have been used: a case could certainly be made for scrapping several chapters that primarily describe out-of-date forecasts for expected world developments in decades past. Nevertheless, for those chapters dealing with fundamental economic principles or containing classic essays on the evolution of the international order, the new edition will continue to be a useful sourcebook.

Credits: Cover art and art on pages 2, 4, and 36: Mark Robinson. Art on page 7: Robert Frederick; pages 18, 19, 21, and 33: Lew Azzinaro; pages 24, 41, 44, and 45: Luisa Watson; page 28: Dale Glasgow. Charts: Dale Glasgow and Luisa Watson. Drawing on page 42: Philip Torsani; IMF photos: Denio Zara and Padraic Hughes-Reid. Bank photos: M. Iannacci.

LETTERS

Global warming: a comment

In the debate "Discounting Our Descendants?" (*Finance & Development*, March 1993), Nancy Birdsall and Andrew Steer are right to argue against low discount rates, for all the reasons they give. May I make two additional points? One is that we do not need low discount rates to arrive at good policies; quite the opposite. The other is that environmental policymaking requires the use of direct instruments, and in the case of the problem in hand, this changes the way we need to calculate the present worth of costs. The discount rate would be a blunt (and probably a counterproductive) instrument of policy.

The implication of William Cline's analysis, that high discount rates imply inaction, is false; it makes unduly pessimistic assumptions about the scope for technical progress and substitution. Several policies can confidently be recommended at present discount rates, in addition to those associated with the "easy" option of energy efficiency. High discount rates will help better choices to be made in carbon dioxide abatement policies because they more likely favor investments with good

economic—not to say commercial—promise, and they also favor the more efficient production and use of energy (which is a capital intensive sector).

Despite all the uncertainties about the greenhouse effect, the one thing we do know is that it is a stock and not a flow problem. We do not yet know what a safe limit on the stocks of carbon in the atmosphere might be, but once it is reached, we will have no alternative than to turn to the backstop, or non-net carbon-emitting technologies to meet our energy needs. The costs of complying with an agreed limit will therefore be determined by the difference between the marginal costs of using these technologies and those of using fossil fuels.

The difference in costs may well be smaller than is implied in Cline's curves. For forty years, the main backstop technology that policymakers have supported has been nuclear power: fission for current generations and fusion for the future. But the 1970s and 1980s saw completely unpredicted reductions in the costs of renewable energy. A convincing case can be made that renewable energy sources will soon become competitive with nuclear power and possibly with fossil fuels; indeed, they are competitive already for small-scale applications. An exception may be in the liquid fuel markets, where it is hard to find low-cost alternatives to gasoline and diesel fuels—though even here the fuel cell may offer surprises. Even if this interpretation is optimistic, we know for certain that functional backstop technologies are emerging at costs not far removed from those of fossil and nuclear fuels. Yet, the recurrent subsidies and tax write-offs for the latter in the United States alone amount to more than a century's worth of research and development in renewables at present rates, and worldwide to a thousand years' worth. It would be a waste if disputes over the discount rate were to detract attention from the far more important problem of eliminating such gross distortions in public policies.

That having been said, global warming shares one feature in common with other resource depletion problems, which is as follows. As we approach the permissible limit on carbon accumulations, whatever it is, the present value of the difference in marginal costs between fossil fuels and the backstop technologies rises at a rate equal to the discount rate. This means that, while we divide the future cost differences by the discount factor [(1+r)**t, where r = the discount rate], we should in theory multiply the imputed costs of complying with the limit or constraint by the same factor. The discounted term thus cancels out in this component of the cost calculations.

Of course, it could be argued that we cannot determine the optimum safe limits on carbon dioxide and other greenhouse gas accumulations without deciding on "r." But it is a brave economist who will stick his or her neck out on this one: climatologists have said that it will be one to two decades before we have a reasonable understanding of the physical consequences of global warming. Moreover, even when the phenomenon is better understood, others will have their say in policy, besides economists, much as they rightly do in other aspects of human welfare, such as health and safety, or the proper treatment and disposal of hazardous wastes. Economists need not be discouraged; cost-benefit analysis cannot answer every question to mankind's satisfaction, and many of us suspect this will be the case for dealing with global warming (should the need arise). They should instead take their cue from engineers and recall their time-honored interests in innovation and substitution.

Dennis Anderson
Energy and Industry Department
The World Bank

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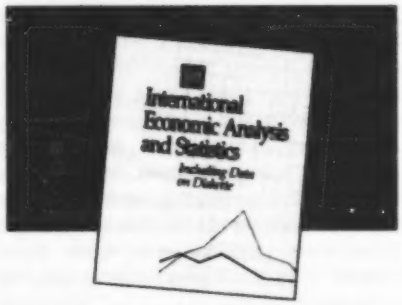

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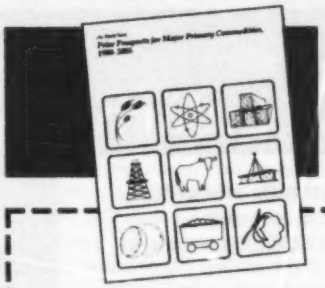

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